

GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.

OM nucleic - nucleic search, using sw model

Run on: May 11, 2002, 14:49:19 ; Search time 1945.53 Seconds
(without alignments)
21125.204 Million cell updates/sec

Title: US-09-911-513-1
Perfect score: 1964
Sequence: 1 taataatcattttttttttt.....tctaaattactcacactggc 1964

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 1797656 seqs, 10463268293 residues

Total number of hits satisfying chosen parameters: 3595312

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : GenEmbl.*

- 1: gb_ba.*
- 2: gb_htg.*
- 3: gb_in.*
- 4: gb_om.*
- 5: gb_ov.*
- 6: gb_pat.*
- 7: gb_ph.*
- 8: gb_pl.*
- 9: gb_pr.*
- 10: gb_ro.*
- 11: gb_sts.*
- 12: gb_sy.*
- 13: gb_un.*
- 14: gb_vi.*
- 15: em_ba.*
- 16: em_fun.*
- 17: em_hum.*
- 18: em_in.*
- 19: em_mu.*
- 20: em_om.*
- 21: em_or.*
- 22: em_ov.*
- 23: em_pat.*
- 24: em_ph.*
- 25: em_pl.*
- 26: em_ro.*
- 27: em_sts.*
- 28: em_un.*
- 29: em_vi.*
- 30: em_htg_hum.*
- 31: em_htg_inv.*
- 32: em_htg_other.*
- 33: em_htgo_inv.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
------------	-------	-------------	--------	-------	-------------

1	1964	100.0	1964	6	A64697	A64697	Sequence 1	1964 bp	DNA	linear	PAT 29-MAR-1999
2	1964	100.0	1964	6	AR174879	AR174879	Sequence 1				
3	1964	100.0	1964	6	ATY15193	ATY15193	Arabidopsis				
4	1922.8	97.9	132699	8	AC006917	AC006917	Genomic s				
5	1907.8	97.1	1951	8	ATRG22	ATRG22	A.thaliana				
6	1854.8	94.4	2097	8	AY058194	AY058194	Arabidops				
7	1580.4	80.5	1643	6	A64699	A64699	Sequence 3				
8	1580.4	80.5	1643	6	AR174880	AR174880	Sequence 5				
9	1570	79.9	1642	6	A64701	A64701	Sequence 9				
10	1570	79.9	1642	6	A64705	A64705	Sequence 9				
11	1570	79.9	1642	6	AR174881	AR174881	Sequence				
12	1570	79.9	1642	6	AR174883	AR174883	Sequence				
13	1536.4	79.2	1636	6	A64703	A64703	Sequence 7				
14	1556.4	79.2	1636	6	AR174882	AR174882	Sequence				
15	915.8	46.6	2210	8	ATRG21	ATRG21	A.thaliana				
16	915.2	46.6	2212	8	AY052329	AY052329	Arabidops				
17	915.2	46.6	2252	8	AY054160	AY054160	Arabidops				
18	915.2	46.6	95137	8	AC005560	AC005560	Arabidops				
19	914.2	46.5	2201	8	ATY15194	ATY15194	Arabidops				
20	879.4	44.8	1779	6	AX081276	AX081276	Sequence				
21	877.8	44.7	1779	6	AX081278	AX081278	Sequence				
22	574.8	29.3	82289	8	ATAC009895	ATAC009895	Arabidops				
23	494.2	25.2	26604	8	ATK3M16	ATK3M16	Arabidops				
24	489.8	24.9	4081	8	ATA224957	ATA224957	Arabidops				
25	488.8	24.9	1665	8	AY048749	AY048749	Arabidops				
26	488.8	24.9	1790	8	AY070035	AY070035	Arabidops				
27	488.8	24.9	85702	8	AC020665	AC020665	Arabidops				
28	418	21.3	2500	8	AB030956	AB030956	Oryza sat				
29	418	21.3	122497	8	AC087797	AC087797	Oryza sat				
30	403	20.5	1890	8	ZMA242530	ZMA242530	Zea mays				
31	403	20.5	2255	6	AX005806	AX005806	Sequence				
32	385.4	19.6	4098	8	AF460219	AF460219	Hordeum v				
33	381.8	19.4	1768	6	AX005804	AX005804	Sequence				
34	381.8	19.4	1872	8	TAE242531	TAE242531	Triticum				
35	381.8	19.4	2125	6	AX005805	AX005805	Sequence				
36	334.2	17.0	2377	8	AF413120	AF413120	Zea mays				
37	334.2	17.0	2413	8	AF413121	AF413121	Zea mays				
38	334.2	17.0	2455	8	AF413202	AF413202	Zea mays				
39	334.2	17.0	2932	8	AF413119	AF413119	Zea mays				
40	334.2	17.0	2971	8	AF413112	AF413112	Zea mays				
41	334.2	17.0	2972	8	AF413115	AF413115	Zea mays				
42	334.2	17.0	2972	8	AF413116	AF413116	Zea mays				
43	334.2	17.0	2972	8	AF413118	AF413118	Zea mays				
44	334	17.0	1746	6	AX005848	AX005848	Sequence				
45	334	17.0	2709	6	AX005794	AX005794	Sequence				

ALIGNMENTS

RESULT	1	A64697	Sequence 1 from Patent WO9729123.	1964 bp	DNA	linear	PAT 29-MAR-1999
LOCUS	A64697	Sequence 1 from Patent WO9729123.					
DEFINITION	A64697	Sequence 1 from Patent WO9729123.					
ACCESSION	A64697	GI:4530762					
VERSION	A64697.1	GI:4530762					
KEYWORDS		thale cress.					
SOURCE		Arabidopsis thaliana					
ORGANISM		Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsi					
REFERENCE		1 (bases 1 to 1964)					
AUTHORS		Harberd,N.P., Peng,J., Carol,P. and Richards,D.E.					
TITLE		NUCLEIC ACID ENCODING GAI GENE OF ARABIDOPSIS THALIANA					
JOURNAL		Patent: WO 9729123-A 1 14-AUG-1997;					
COMMENT		INNES JOHN CENTRE INNOV LTD (GB)					
FEATURES		Other publication AU 1799697 19970828.					
		Location/Qualifiers					
		1..1964					
		/organism="Arabidopsis thaliana"					
		/strain="LANDSBERG ERECTA"					
		/db_xref="taxon:3702"					

D	b	721	GCTTTTGGCTTGCGCTGAAGCTGTTTCAGAAGGAGAAATCTGACTGTGGCGGGAAGCTCTGGT	780
Q	y	781	gaagcaaatcgattcttagctgttttctcaaatcgcgagcatatgagaataagtcgcactatta	840
D	b	781	GAAGCAATCGAATTCTTAGCTTTCTCAAATCGSAGCATATGAGAAAAGTCGCTACTTA	840
Q	y	841	cttcgcgaagtctccgcgcggcgaattaccgtctctctccgtccgaagatccaatcga	900
D	b	841	C TTCGCCGAAGCTCTCGCGCGCGGAATTACCGTCTCTCCGTCGCAGAGATCCAATCGA	900
Q	y	901	ccactctctccgatatactcttcagatgcacctcttacgagacttgctcttatctcaagtt	960
D	b	901	CCACTCTCTCCGATACTCTTCAGATGCACCTTCACGAGACTTGTCTTATCTCAAGTT	960
Q	y	961	cgtcacctcaacggggaatacaagcgaattctcgaagcttttcaaagggaagaagaagtcca	1020
D	b	961	CGCTCACTTCACGGCGGAATCAACGGAATCTCGAAGCTTTTCAAGSGGAAGAAAAGATTCA	1020
Q	y	1021	tgtcaatgatctctatagtcgaaggtctcctaaggccgcgccttatgcaggtctctgc	1080
D	b	1021	TGTCATTGATTTCTCTATGAGTCAAGGCTCTTCAATGGCGCGCGCTTATGCAGGCTCTTGC	1080
Q	y	1081	gcttcgacctgggtgctctctctgttttccggttaaccggaaatggtccaccgcgcacogga	1140
D	b	1081	GCTTTCGACCTTGGTGGTCTCCTCTTTTCCGGTTTAACCGGAATTGGTCCACC GCGCACCGGA	1140
Q	y	1141	taatttcgattatctcataagaattgggttgtaagctgactcaattagctgaagcgattca	1200
D	b	1141	TAATTTTCGAATATCTTCATGAAGTTGGGTGTGAAGCTGGCTCAITTAGCTGAGGCGATTCA	1200
Q	y	1201	cgttgagtttgatcacagaggaatttgtgcctaacacttttagctatcttgatctgcctcgat	1260
D	b	1201	CGTTGAGTTTTGACTACAGAGGATTTGTGGCTTAACACTTTTAGCTGATCTTTGATGCTTCGAT	1260
Q	y	1261	gcttgagcttagacaagaatgagatatgaactctgttcggttaaactctgttttcgagattcca	1320
D	b	1261	GCTTGAGCTTAGACCAAGTGAAGATTGAATTCCTGTGCGGTTAACTCTGTTTTTCGAGCTTCA	1320
Q	y	1321	caagctcttggagcaccttggctgcatacgataaggtctcttgggttgggaaatcacagattaa	1380
D	b	1321	CAAGCTCTTGGGACGACCTTGGTCGATCGATAAGGTTCTTGGTGTGGTGAATCAGATTAA	1380
Q	y	1381	accggagattttcaactgttggttgagcaggaaatcgacaaccaataatagtcogatcttcttaga	1440
D	b	1381	ACCGGAGATTTTCACCTGTGGTTGACGAGAAATCGAACCAATAATATAGTC CGAATTTTCTTAGA	1440
Q	y	1441	tcggtttactgagctgtgcattattactccgacgttgtttgactcgttgggaaggtgtacc	1500
D	b	1441	TCGGTTTACTGAGCTCGTTGCATTTATCTCGACGTTGTTTGNCTCGTTTGGGAAGGTGTACC	1500
Q	y	1501	gagtggtcaagacaaggctcatgttcggaggttttacttgggttaaacagatctgcaacgttgtt	1560
D	b	1501	GAGTGGTCAAGACAAGGTCATGTGCGGAGGTTTACTTTGGTAAACAGAGATCTCGAACGTTGT	1560
Q	y	1561	ggcttgtgatgaacctgaaccgagttgagcgtcatatgaacacgttgagtcagtgaggagaaccg	1620
D	b	1561	GGCTTGATGTGACCTTGACCGAGTTGAGCGTTCATGAACGTTGAGTCAAGTGGAGGAACCG	1620
Q	y	1621	gttcgggtctcgtgggttttcggcgtgcacattatgggttcgaatgcgttttaagcaagcgag	1680
D	b	1621	GTTTCGGGCTGCTGGGCTTTCGGSCTGCACATATTGGTTCGAATGCGTTTAAAGCAAGCGAG	1680
Q	y	1681	tatgcttttggctctgttcaacggcgggtgaggggttatcgggttgagagagatgcagcgctg	1740
D	b	1681	TATGCTTTTGGCTCTGCTTCAACGGCGGTTGAGGGTTTATCGGGTGGAGAGAGATGACGGCTG	1740
Q	y	1741	tctcatgttgggttggcacacacgaccgctatagccacctcgccttggaaactctccac	1800
D	b	1741	TC TCATGTTGGGTTGGCACACACGACCGCTCATACCCACTTCGCGCTTGGAAAACTCTCCAC	1800
Q	y	1801	caatagatggtggctccaatgaattgatctgttgaaacogggttatgatgatagattcccga	1860
D	b	1801	CAATTAGATGGTGGCTCAATGAATGATCTGTGTGAACGGGTTATCATGATGATGATTTCCGA	1860

```
Qy 1861 ccgaagcacaactactactgttttcccttcttgatcactgttgtaagatcttatcttc 1920
|||||
Db 1861 CCGAAGCACAACCTAACTCTCTTTTCCCTTTGTCACCTGTGTAAAGATCTTATCTTC 1920

Qy 1921 attatattaggaattgaaataattctaaattactcacactggc 1964
|||||
Db 1921 ATTATATTAGGTAATTGAAAAATTTCTAAATTTACTCACACTGGC 1964

RESULT 3
ATY15193
LOCUS ATY15193 1964 bp DNA linear PLN 01-NOV-1997
DEFINITION Arabidopsis thaliana GAI gene.
ACCESSION Y15193
VERSION Y15193.1 GI:2569937
KEYWORDS GAI gene.
SOURCE thale cress.
ORGANISM Arabidopsis thaliana
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
REFERENCE 1 (bases 1 to 1964)
AUTHORS Peng,J., Carol,P., Richards,D.E., King,K.E., Cowling,R.J.,
Murphy,G.P. and Harberd,N.P.
TITLE The Arabidopsis GAI gene defines a signalling pathway that
negatively regulates gibberellin responses
GENES Dev. In press
REFERENCE 2 (bases 1 to 1964)
AUTHORS Harberd,N.P.
TITLE Direct Submission
JOURNAL Submitted (22-Oct-1997) N.P. Harberd, John Innes Centre, Molecular
Genetics, Colney Lane, Norwich, NR4 7UJ, UK
FEATURES
source
1. 1964
/organism="Arabidopsis thaliana"
/strain="Landsberg erecta"
/db_xref="taxon:3702"
/chromosome="1"
209..1807
/gene="GAI"
209..1807
/gene="GAI"
/codon_start=1
/protein_id="CAA75492.1"
/db_xref="GI:2569938"
/db_xref="SPTREMBL:O23724"
/translation="MKRDHHHHODKKTMMNEEDDNGMDLAVLGVKVRSEMD
VAKLQLEVMNSVQEDDLQSOLATETVHYNPAELYTWLDSMLTDLNPSSNAEYDLK
ATFGDALNQFAIDSSSSNOGGGDTYTNKRLKCSNGVVEITTAESTRHLVD
SQBNQRLVHALLACAEAVOKENLTVAELVKQIGFVLAQSGAMRKRVATYFAELAR
RIYRLSPSQSPIDHLSLSDTLQMHFETCPYLKFAHFTANQAILLEAFQGRKRVHVIDFS
MSQGLQWALMALRPGPPVFRLTGIGPAPDNFDYLHEVGCKLAHLAEAIHVEF
EYGFVANTLADLSDMLRPSIEVANSVFEHLKLLRPGATDKVLGVVNOIKP
EIFTVVEQSNHNSPIFLDQFTESLHYSTLFDLSLEQVSGODKVMSEVYLCKOICNV
VACDGRDVERHETLSQWRNRFSGAFAAHIGSNAPKQASMLLALFNNGEGYRVEES
DGCMLGWHTRPLIATSAKMLSTN"
BASE COUNT 489 a 426 c 474 g 575 t
ORIGIN

Query Match 100.0%; Score 1964; DB 8; Length 1964;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 1964; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 taataatcatttttttctataacctctctctctatttttacaattttttgtatta 60
|||||
Db 1 TAATAATCAATTTTTTCTATATAACCTCTCTCTATATTTTACAAATTTATTTGTATTA 60

Qy 61 gaagtgttagtggaagtaaaaaaataatcctaaagcagtcctaacccgacccgaagctaa 120
|||||
Db 61 GAACTGTGTAGTGGAGTGAAAAACAATACTTAAGCAGCTCTCAACCGATCCCGAAGCTAA 120
```

Db	1201	CGTTGAGTTTACGACAGAGATTGTGGCTAACACTTTAGCTGATCTTCATGCTTCGAT	1260	
Qy	1261	gcttgagcttagacaagtagattgaatctgttgctgaatctctgttttcgagcttca	1320	
Db	1261	CCTTGAGCTTAGACCAAGTAGATGAATCTGTTGGCGGTAACTCTGTTTCGAGCTTCA	1320	
Qy	1321	caagctcttggaagcagctggtgcgagtcgataaggttcttggtggtggaatcagattaa	1380	
Db	1321	CAAGCTCTTGGACGACCTGCTGCGATCGATGAAGGTTCTTGCTGTGGAATCAGATTAA	1380	
Qy	1381	accgagagatttcaactggttgagcaggaatcgaaacataatagtcgattttcttaga	1440	
Db	1381	ACCGAGAGATTTTCACTGCTGTTGAGCAGGAATCGAACCATTAATAGTCGATTTCCTTAGA	1440	
Qy	1441	tcggttactagtcgctgtgatttactgcagctgtgttgactcgttggaagtgtagc	1500	
Db	1441	TCGGTTTACTGAGTCGTTGCTGATTTACTCGACGCTGTTGACTCGTTGGAAGGTGTACC	1500	
Qy	1501	gagtggttcaagacaaggtctatgctcgaggttttacttgggttaaacagatctgcaacgttgt	1560	
Db	1501	GAGTGGTCAAGACAAGGTCATGTCGGAGGTTTACTTGGTTAAACAGATCTGCAACGTTGT	1560	
Qy	1561	gcttgtagtagaactcagcaggttagcgtcatgaaacgttgtagtcagtgaggaacccg	1620	
Db	1561	GGCTGTGTGATGGACCTGACCGAGTTGAGCGGTCATGAACCGTTGAGTCAGTGAGGAACCG	1620	
Qy	1621	gttcggtctgctggtgttgcggtcgacatattggttcgaatcgttttaagcagcgag	1680	
Db	1621	GTTCCGGTCTGCTGGGTTTGGCGGTGCACATATGTTGTTGCTGCAATCGGTTTAAACAGCGAG	1680	
Qy	1681	tatgcttttggctctgttcaacggtgaggttatcgggtgagagagtagcagcgtg	1740	
Db	1681	TATGCTTTTGGCTCTGTTCAACGCGGTGAGGGTTATCGGGTGAGGAGAGTAGCGGCTG	1740	
Qy	1741	tctcatgttggttggtgacacacacagcagctcatgaccactcgtctggaaactctccac	1800	
Db	1741	TCTCATGTTGGGTTGGCACACACACCGCTCATGACCCACCTCGGCTTGGAAACTCTCCAC	1800	
Qy	1801	caatagatggtgctcaatgaattgctgttgtaacggttatgtagatgattagattccga	1860	
Db	1801	CAATTAGATGCTGCTCAATGAATTGATCTGTTGAACCGGTATGATGATGATGATTCCGA	1860	
Qy	1861	ccgaagccaaactaaactctactgttttcccttctgtaactgttgaagattctattcttc	1920	
Db	1861	CCGAAGCCAAACTAAATCCTACTGTTTCCCTTTGCTGCTGTTGACTGTTAAGATCTTATCTTC	1920	
Qy	1921	attatattagtagtaattcaaaattctcaattactcactggc	1964	
Db	1921	ATTATATTAGTAGTAATTGAAAATTTCTAAATTTACTCACACTGGC	1964	
RESULT	4			
AC006917	LOCUS	132699 bp	DNA	linear
AC006917	DEFINITION	Genomic sequence for Arabidopsis thaliana BAC F10B6 from chromosome I, complete sequence.		
AC006917	VERSION	AC006917.6	GI:4757662	
AC006917	KEYWORDS	HTG.		
AC006917	SOURCE	thale cress.		
AC006917	ORGANISM	Arabidopsis thaliana		
AC006917	REFERENCE	Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.		
AC006917	AUTHORS	1 (bases 1 to 132699)		
AC006917	REFERENCE	Chao,Q., Shinn,P., Dunn,P., Buehler,E., Kahn,S., Kim,C., Walker,M., Williams,S., Altafi,H., Araujo,R., Conn,L., Conway,A.B., Gonzalez,A., Hansen,N.F., Huizar,L., Kremenetskaia,I., Lenz,C., Li,J., Liu,S., Luros,S., Rowley,D., Schwartz,J., Toriumi,M., Vysotskaia,V., Yu,G., Davis,R.W., Federspiel,N.A., Theologis,A. and Ecker,J.R.		
AC006917	TITLE	Genomic sequence for Arabidopsis thaliana BAC F10B6 from chromosome I		
AC006917	REFERENCE	Unpublished		
AC006917	REFERENCE	2 (bases 1 to 132699)		
AC006917	AUTHORS	Ecker,J.R.		
AC006917	TITLE	Direct Submission		
AC006917	JOURNAL	Submitted (25-FEB-1999) Arabidopsis thaliana Genome Center, Department of Biology, University of Pennsylvania, 38th Street and Hamilton Walk, Philadelphia, Pennsylvania 19104-6018, USA		
AC006917	REFERENCE	3 (bases 1 to 132699)		
AC006917	AUTHORS	Ecker,J.R.		
AC006917	TITLE	Direct Submission		
AC006917	JOURNAL	Submitted (07-MAY-1999) Arabidopsis thaliana Genome Center, Department of Biology, University of Pennsylvania, 38th Street and Hamilton Walk, Philadelphia, Pennsylvania 19104-6018, USA		
AC006917	REFERENCE	4 (bases 1 to 132699)		
AC006917	AUTHORS	Johnson-Hopson,C., Khan,S., Kim,C., Altafi,H., Bei,B., Chin,C., Chio,J., Choi,E., Conn,L., Conway,A., Gonzalez,A., Hansen,N., Howing,B., Koo,T., Lam,B., Lee,J., Lenz,C., Li,J., Liu,A., Liu,J., Liu,S., Mukharzky,N., Nguyen,M., Palm,C., Pham,P., Sakano,H., Schwartz,J., Southwick,A., Thaveri,A., Toriumi,M., Vaysberg,M., Yu,G., Davis,R., Federspiel,N., Theologis,A. and Ecker,J.		
AC006917	TITLE	Direct Submission		
AC006917	JOURNAL	Submitted (28-JUN-2000) Arabidopsis thaliana Genome Center, Department of Biology, University of Pennsylvania, 38th and Hamilton Walk, Philadelphia, PA 19104-6018, USA		
AC006917	COMMENT	On May 7, 1999 this sequence version replaced gi:4731042.		
AC006917	FEATURES	Location/Qualifiers		
AC006917	SOURCE	1. 132699		
AC006917	CDS	/organism="Arabidopsis thaliana"		
AC006917	CDS	/db_xref="taxon:3702"		
AC006917	CDS	/chromosome="1"		
AC006917	CDS	complement(join(144..278,360..491,576..673,814..1435,1749..1867,2161..2310,2441..2565,2698..2742,2837..2902,2979..3031,3117..3234,3314..3415,3498..3655,3741..3818,3894..3985,4054..4104,4138..4420))		
AC006917	CDS	/note="similar to Na/H antiporter dbj BAA89487.1"		
AC006917	CDS	/codon_start=1		
AC006917	CDS	/evidence=not_experimental		
AC006917	CDS	/product="F10B6.1"		
AC006917	CDS	/protein_id="AAF79251.1"		
AC006917	CDS	/db_xref="GI:8778242"		
AC006917	CDS	/translation="MTSIIIGALPYKSPKAIASSSYSAENSSPVDVAFAGTSVLVGTACRYLFGNTRVPYTVVLLVIGFLGSLGLCLIKLYSSISWIKLEYGTGKHNHKLGHGIRWNGINPDLLAVFLPVLFFSSMDVHQKRCMQOMVLLAGPGLVISTFCGLALIKLTFFPNWDMKTSLLGLGLGATDPVAVALLKELGASKMTLLIDGESLMNDGVSVVFLPFKVMYGHNSDWSIIKFLVONSGCAVCGIGAFGTASVFWLKFIPNDTVAQITVLSASYFAYTAQERAGVSGILTVMILGMFAAFARTAFKGSQSHLHPWEMAAIANTLVFMISCVIIIAESVLSQITISYKGVSSQFIILRPFFILFLEDVKGNGSWSFLLYVOLSRVGVVGVLYPLLCRSYGLDWKESIILTWGLRAVLQFLFUTGIVFLTVVNGSTTQLLHLLRMDTLATKKRILEYKFEKMTALKAFENLGDDEELGCADWPTVIRHISLKDLEGROVPHDGEAGSLDPTNIMDIRFLNGISOCVYNSHSCOTSVVKAVIDSLRPVSGVQAAWEMLDGRTQCTANVMQSDVDEALDLVSTSSLSWRGLERPVHPNYYKFLQSKIIIPKLVTHLIVERLESACYISSAFIRAHRIARQQLHIFLGNISASTVINESEVEGEAAKQFLEDVRDSPQVLKTKQVTHVYLNHLNGYTKNELKGLLEGKESHLDVQVSDLKLLKLRHPPSLKLPNVNDDLTITSNPLKDRSFRTSIAIGETDA"		
AC006917	CDS	join(5650..5801,6081..6121,6230..6819)		
AC006917	CDS	/note="unknown protein; similar to EST emb F14394.1"		
AC006917	CDS	/codon_start=1		
AC006917	CDS	/evidence=not_experimental		
AC006917	CDS	/product="F10B6.2"		
AC006917	CDS	/protein_id="AAF79216.1"		
AC006917	CDS	/db_xref="GI:8778207"		
AC006917	CDS	/translation="MRTPTIILLVCAILFSGAGVYRSASDHRKYEKGDTVPLYANKVGFHPNSETIRYFDLPFCIPEGVKEKKEALGEVLDRLVSAPYKLNFRDEKSEVYCNKLLSKEEYQKFAVKEDYFYQMYDDLPINGFTGKVDKDKISQSPSEKRYELKHQIFELYNKRDIETISARMDSPLVDLTDEKVEDAEFMFTVKKETTFPEKRMKYSMSLSLPHLEIHWFSIINSCVTVLLTGTFLATILMRVLKNDPMK"		
AC006917	CDS	join(6881..7029,7140..7296,7392..7876,7961..8180)		
AC006917	CDS	/note="similar to transmembrane 9 superfamily member 2 gi 4758874; similar to dbj AV442489.1, gb AI996021.1, emb F14395.1"		

Db 118747	TGTCGCTTTGTGATGGCACTGACCGAGTTTGAGCGTCATGAAACCTTGAGTCACTGAGAGGAA	118801
Qy 1618	ccggttcggggtctgctggttgcggtgcacatattgggtcgaatgcgttttaagcaacg	1677
Db 118807	CCGCTTCGGGTCTGCTGGGTTTCGGCGTCACATATTTGGTTCCAATCGCTTTAAGCAAGC	118866
Qy 1678	gagtatgcttttggtcctctgttcaacgscggtgaggggttatcggggtgagagagatgacgg	1737
Db 118867	GAGTATGCTTTTGGCTCTGTTTCAACGCGGTGAGGGTTATTCGGGGTCGGAGGAGTCAACG	118926
Qy 1738	ctgtctcatattgggttggcacacacagacgcctcatagccactcggttggaaactctc	1797
Db 118927	CTGTCTCATGTTGGGTTGGCACACACACACGCGCTCATAGCCACTCGCTTGGAAACTCTTC	118986
Qy 1798	caccaattagatggtgctcaatgaattgatctgttgaaccggttatgatgatagatttc	1857
Db 118987	CACCAATTAGATGGTGCTCAANTGAATGATCTGTTGAACCGGTTATGATGATAGATTTC	119046
Qy 1858	cgaccgaagccaaactaaactcctactgttttcccttctgcatctgttaagatcttatct	1917
Db 119047	CGACCGAAGCGCAAACTAAATCCTACTGTTTTCCTCTGTTCACTGTTAAGATCTTATCT	119106
Qy 1918	ttcattattagtaattgaaataattctctaaataattc	1955
Db 119107	TTCAATTATTAGGTAATGAAAAATTTTAATCTCGCT	119144
RESULT 5		
ATRGA2		
LOCUS	ATRGA2	1951 bp mRNA linear PLN 19-AUG-19
DEFINITION	A.thaliana mRNA for RGA2 gene.	
ACCESSION	Y11337	
VERSION	Y11337.1	GI:2339979
KEYWORDS	RGA2 gene.	
SOURCE	thale cress.	
ORGANISM	Arabidopsis thaliana	
REFERENCE	Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.	
AUTHORS	1 (bases 1 to 1951)	
TITLE	Tuong,H.N., Caboche,M. and Daniel-Vedele,F.	
JOURNAL	Sequence and characterization of two Arabidopsis thaliana cDNAs isolated by functional complementation of a yeast gln3 gdh1 mutant	
MEDLINE	FEBS Lett. 410 (2-3), 213-218 (1997)	
REFERENCE	97379310	
AUTHORS	2 (bases 1 to 1951)	
TITLE	Tuong,H.N.	
JOURNAL	Direct Submission	
FEATURES	Submitted (13-FEB-1997) H.N. Tuong, INRA-Versailles, Laboratoire de Biologie Cellulaire, Route de Saint-Cyr, 78026 Versailles Cede FRANCE	
source	Location/Qualifiers	
	1. :1951	
	/organism="Arabidopsis thaliana"	
	/sub_species="(t). Heynh"	
	/db_xref="taxon:3702"	
	/dev_stage="two-leaf stage seedlings"	
	/note="landsberg erecta ecotype"	
gene	195..1794	
	/gene="RGA2"	
CDS	196..1794	
	/gene="RGA2"	
	/codon_start=1	
	/product="RGA2 protein"	
	/protein_id="CAA72178.1"	
	/db_xref="GI:23399980"	
	/db_xref="SPTREMBL:O23643"	
	/translation="MKRDHHHHQDKTMMNNEEDGNGMDLLAVLGVKYSRSEMAVACKLEQLEVMNMQVEDLSOLATETVHYNPAELYTWLDSMTDLNPPSSNAEVDLALPGDRLNQFALIDASSNCGGGDTYTNKRLKCSNGVYETTATTAESTRHVLLSOENGVRVLHALLACAEVQKNLVAEALVKQIGFLAVSQIGAMQVATYFABALLRIYLSFSPSDIOHLSLDPQLQHHFETCPYLKFAHFTANOAILFAFGCKRKHVHIVLMSGLOGLPALMOALALRPGCGPPVFLRTGIPGPAPDNFDYLHEVGCGLAHLEAIVHIV	

YRGRFVANTLADLDASMLELRPSIEISVAVNSVFLHKLGRPGADKVLGVVNOIKP
EITFVQESNHNSPIFLDRFTESLHYSTLFDLSLEGVPSGDKVSEVYLGRKOICNV
VACDGPDRVERHETLSQWRNRFSGAGFAAAHIGSNAPKQASMLLALFNGBEGYRVEES
DGCIMLGWHTRPLIATISAWKLSTN"
BASE COUNT 482 a 419 c 475 g 575 t
ORIGIN

Query Match		97.1%	Score 1907.8	DB 8	Length 1951
Best Local Similarity		99.1%	Pred. No. 0		
Matches 1918		Conservative 0	Mismatches 17	Indels 0	Gaps 0
Qy	27	ttcctctctattttacaaatttatttggttatttagaagtggttagtgagtgaaacaa	86		
Db	14	TTTTTTTTTTTTTACAAATTTATTTGTTATTAGAAAGTGGTAGTGGAGTGAAAAACAA	73		
Qy	87	atcttaagcagtcctaaccgagcccccgaagctaaagattcttcacctcccaataaagc	146		
Db	74	ATCCTAAGCAGTCTTAACCGATCCCGNAGCTAAAGATTCTTTCACCTTCCCAATAAAGC	133		
Qy	147	aaaactagatcccgacattgaaggaacaccttttagatccatctctgaacaaaccaa	206		
Db	134	AAAACCTAGATCCGACATTGAAGGAAAAACCTTTTAGATCCATCTCTGAAAAAACCCAA	193		
Qy	207	ccatgaagagagatcatcatcatcatcaagaataagaagactatgatgaatgaag	266		
Db	194	CCATGAAGAGAGATCATCATCATCATCAAGATAAGATAAGAGACTATGATGATGAATGAAG	253		
Qy	267	aagacgacggglaacgagatgatgctcttagcttcttcttggttacaaggttaggtcat	326		
Db	254	AAGACGAGGTAAACGGCATGATGAGCTTCTAGCTGTTCTTGGTTACAAGGTTAGGTTCAT	313		
Qy	327	cggaatagtgctgattgtgctcagaactcgagcagcttggaagttatgatgtctaatgttc	386		
Db	314	CGGAATGGCTGATGTTGCTCAGAACTCGAGCAGCTTGAAGTTATGATGTCTTAATGTTTC	373		
Qy	367	aagaagacagctttctcaactcgactgaagactgttcaactataatccggcagagcttt	446		
Db	374	AAGAAGACGATCTTCTCAACTCGCTACTGAGACTGTTCACATATAATCCGCGGAGGTTT	433		
Qy	447	acagtggtgattctatgctaccgaccttaactccgctcgctcctaaagcagagtaag	506		
Db	434	ACACGTGGCTTGATCTATGCTCACCGACCTTAATCCTCCGCTCTTAACGCCGAGTACG	493		
Qy	507	atcttaagctattcccggtgacgcgattctcaatcgaagtttgcgtatcgattcggtcttt	566		
Db	494	ATCTTAAAGCTATTCCCGGTGACGCGATTCTCAATCAGTTTCGCTATCGCTATCGGCTTCTT	553		
Qy	567	cgctcaacgaagcggcgaagagatagctatactacaacaaagcgttgaaatgctcaa	626		
Db	554	CGTCTAACCAAGGCGGAGGAGATACGTATATACTACAAACAAACGGTTGAAATGCTCAA	613		
Qy	627	acggcgctgtggaacaccacacgacgcgctgagtcacactcggcatgtgttcctggtg	686		
Db	614	ACGGCGTCTGGAAACACACACGAGCGGTGAGTCAACTCGGCATGTTGTCCTGGTTG	673		
Qy	687	actcgcaggagaacggtgctgctcgcttcacgcgcttttggcttgcgtgaaagctgttc	746		
Db	674	ACTCGCAGGAGAAGCGGTGCTGCTCTCGTTTACGCGCTTTTGGCTTGGCGTGAAGCTGTT	733		
Qy	747	agaaggaatctgactgtggcgaagctctggtgaagcaaatcggtattcttagctgttt	806		
Db	734	AGAAGGAATCTGACTGTGGCGGAAGCTCTGGTGAAGCAAAATCGGATTTCTAGCTGTTT	793		
Qy	807	ctcaactcggaagctatgagaagaactcgactacttacttcgcgaagctctcgcgcgcgga	866		
Db	794	CTCAAAATCGGAGCTATGAGACAAGTCGCTACTTACTTGGCGGAAGCTCTCGCGGGCGGA	853		
Qy	867	ttaccgctctctccgtcgcagagtcocactcgaccactctctctccgatactcttcaga	926		
Db	854	TTTACCGCTCTCTCCGTCGCAGAGTCCAAATCGACCACTCTCTCTCCGATACTCTTCAGA	913		
Qy	927	tgcacttctacgacacttgctcttatctcaagttcgcctcacttcaacggaatacaagca	986		

RESULT 6

Db	914	TGCACCTTCTACGAGACTTGCCCTTATCTCAAGTTCGCTCACTTCACGGCGAAACAACGCA	973
Qy	987	ttctcgaagcttttcaaaggaagaaagagttcatgttcattgatttctctatgagtcag	1046
Db	974	TTCTCGAAGCTTTTCAAGGGAAGAAAGAGTTCATGTCATTTGATTCTCTATGAGTCAAG	1033
Qy	1047	gtcttcaatggccggcgcttatgcaggctcttgogcttcgacctgggtgctctctctgtt	1106
Db	1034	GTCTTCAATGCCGGCGCTTATGCAAGCTCTTGCGCTTCGACCTGGTGGTCTCTCTCTTT	1093
Qy	1107	tcgggttaaacgggaattgggtccaccggcacgggaataatttcgatttcttcatgaattg	1166
Db	1094	TCCGGTTTAAACCGGAATTTGGTCCACCGCACGGGATAAATTCGATTTATCTTCATGAAGTTG	1153
Qy	1167	gggttaagcgtggctcatttagctgagcgatttcacgttgagtttgagtcacagagattg	1226
Db	1154	GGTGTAAAGCTTGCTCATTTAGCTGAGCGGATTCACGTTGAGTTTGAGTACAGAGATTG	1213
Qy	1227	tggttaacacttttagctgattcttgatgcttcgatgcttgagcttagaccaagttagattg	1286
Db	1214	TGGCTAAACCTTTAGCTGATCTTGTGATCTTCGATGCTTGAGCTTAGACCAAGTGAGATTG	1273
Qy	1287	aactgttgccggttaactctgttttcgagcttcacaagctcttggacacacctggtcga	1346
Db	1274	AATCTGTTCGGTTAACTCTGTCTTCGAGCTTCACAAGCTCTTGGGACGACCTGGTGCGA	1333
Qy	1347	tcgataaggttcttgggtggtgaatcagatcaaacggagatttttcaactggtggtgagc	1406
Db	1334	TCGATAAGGTTCTTGGTGTGTGAATCAGATTAAACGGGAGATTTTTCACGTGTGTTGAGC	1393
Qy	1407	aggaatcgaaccataatagtcagatttcttagatcggtttactgagtcggttcgattatt	1466
Db	1394	AGGAATCGAACCAATAATAGTCCGATTTTCTTAGATCGGTTTACTGAGTCGTTGCATTTT	1453
Qy	1467	actcgcagctgtttgactcgttggaaggtgtacgcagtggtcaagacaaggtcatgctcg	1526
Db	1454	ACTCGACGTTGTTGACTCGTTGGAAGGTGTACCGAGTGTTCAGACAAAGGTCAATGTCGG	1513
Qy	1527	aggttacttgggttaaacagatctgcaacgttgggtgtgtgagcttgagcgcctgacccgattg	1586
Db	1514	AGGTTTACTTTGGGTAAACAGATCTGCAACGTTGTGGCTTGTGATGGACCTGACCGAGTTG	1573
Qy	1587	agcgtcatgaaacgttgagtcagtggaagaaacgggttcggggtctgctggttttcggtctg	1646
Db	1574	AGCGTCAATGAACGCTTGAGTCAGTGGAGAACCGGTTTCGGGTCTGCTGGGTTTCGGGCTG	1633
Qy	1647	cacatatgtgtcgaatgcgtttaagcaagcagatgcttcttgggtctgttcaacgcgcg	1706
Db	1634	CACATTTGGTTTGAATGCCGTTTAAAGCAACGAGATGCTGCTTTTGGCTCTGTTCAACGGCG	1693
Qy	1707	gtgaggttatcgggttgagagagagtgacggtctgctcatgttgggttgggcacacacgac	1766
Db	1694	GTGAGGCTTATTCGGTGGAGAGAGTGCAGGCTGCTCTCATGTTGGGTTGGCACACACGAC	1753
Qy	1767	cgctcatagcacctcggttgaaactctccaccaattagatgggtggtcgaatgaattg	1826
Db	1754	CGCTCATAGCACCTCGGCTTGGAACTCTCCACCAATTAGATGGTGGCTCAATGAATTG	1813
Qy	1827	atctgttgaaccggttatgatgatagatttccgacgaagcgaacaaactcactctgtt	1886
Db	1814	ATCTGTTGAACCGGTTATGATGATAGATTTCGACCGAAGCCAAACTAAATCTCTACTGTT	1873
Qy	1887	tttcccttctgactgttgaagatcttattcttcttcttatttaggttaattgaaataatttc	1946
Db	1874	TTTCCCTTTGTCACCTGTTAAGATCTTATCTTTCATTTATAGGTAATTAAGTAATTTT	1933
Qy	1947	taaatctactcacact 1961	
Db	1934	AATCTCGCCTAAATTT 1948	

AY058194	Arabisopsis thaliana Atlg14920/F10B6_15 mRNA linear PLN 04-NOV-2001
LOCUS	Arabisopsis thaliana Atlg14920/F10B6_15 mRNA, complete cds.
DEFINITION	Arabisopsis thaliana Atlg14920/F10B6_15 mRNA, complete cds.
ACCESSION	AY058194
VERSION	AY058194.1 GI:16648833
KEYWORDS	FLI_CDNA.
SOURCE	thale cress.
ORGANISM	Arabisopsis thaliana
REFERENCE	Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
AUTHORS	Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
	Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
	1 (bases 1 to 2097)
	Cheuk,R., Chen,H., Kim,C.J., Koesema,E., Meyers,M.C., Banh,J.,
	Bowser,L., Carninci,P., Dale,J.M., Goldsmith,A.D., Hayashizaki,Y.,
	Ishida,J., Jiang,P.X., Jones,T., Kamiya,A., Karlin-Neumann,G.,
	Kawai,J., Lam,B., Lee,J.M., Lin,J., Liu,S.X., Miranda,M.,
	Narusaka,M., Nguyen,M., Onodera,C.S., Palm,C.J., Pham,P.K.,
	Quach,H.L., Sakurai,T., Satou,M., Seki,M., Southwick,A., Tang,C.C.,
	Toriuni,M., Yamada,K., Yamamura,Y., Yu,G., Yu,S., Shinozaki,K.,
	Davis,R.W., Theologis,A. and Ecker,J.R.
	Arabisopsis cDNA clones
	Unpublished
	2 (bases 1 to 2097)
	Cheuk,R., Chen,H., Kim,C.J., Koesema,E., Meyers,M.C., Banh,J.,
	Bowser,L., Carninci,P., Dale,J.M., Goldsmith,A.D., Hayashizaki,Y.,
	Ishida,J., Jiang,P.X., Jones,T., Kamiya,A., Karlin-Neumann,G.,
	Kawai,J., Lam,B., Lee,J.M., Lin,J., Liu,S.X., Miranda,M.,
	Narusaka,M., Nguyen,M., Onodera,C.S., Palm,C.J., Pham,P.K.,
	Quach,H.L., Sakurai,T., Satou,M., Seki,M., Southwick,A., Tang,C.C.,
	Toriuni,M., Yamada,K., Yamamura,Y., Yu,G., Yu,S., Shinozaki,K.,
	Davis,R.W., Theologis,A. and Ecker,J.R.
	Direct Submission
	Submitted (28-AUG-2001) Salk Institute Genomic Analysis Laboratory
	(SIGNAL), Plant Biology Laboratory, The Salk Institute for
	Biological Studies, 10010 N. Torrey Pines Road, La Jolla, CA 92037,
	USA
	RIKEN Genomic Sciences Center (GSC) members carried out the
	collection and annotation of the RAFL cDNAs (RAFL CDNA : 'RIKEN
	Arabidopsis Full-Length cDNA') : Seki,M., Narusaka,M., Ishida,J.,
	Satou,M., Kamiya,A., Sakurai,T., Carninci,P., Kawai,J.,
	Hayashizaki,Y. and Shinozaki,K.
	The Salk, Stanford, PDEC (SSP) Consortium members carried out the
	sequencing and annotation of the RAFL cDNAs: Cheuk,R., Chen,H.,
	Kim,C.J., Koesema,E., Meyers,M.C., Shinn,P., Banh,J., Bowser,L.,
	Dale,J.M., Goldsmith,A.D., Jiang,P.X., Jones,T., Karlin-Neumann,G.,
	Lam,B., Lee,J.M., Lin,J., Liu,S.X., Miranda,M., Nguyen,M.,
	Onodera,C.S., Palm,C.J., Pham,P.K., Quach,H.L., Southwick,A.,
	Tang,C.C., Toriuni,M., Yamada,K., Yamamura,Y., Yu,G., Yu,S.,
	Davis,R.W., Theologis,A., and Ecker,J.R.
	Cheuk,R. (SSP/Salk) and Seki,M. (RIKEN GSC) contributed equally to
	this work. Shinozaki,K. (RIKEN GSC) and Ecker,J.R. (SSP/Salk)
	contributed equally to this work as PIs.
FEATURES	Location/Qualifiers
source	1. .2097
	/organism="Arabidopsis thaliana"
	/db_xref="taxon:3702"
	/chromosome="1"
	/clone="RAFL09-10-N02(R14047)"
	/note="ecotype: Columbia"
	1. .140
	141. .1742
	/note="signal response protein (GAI)"
	/codon_start=1
	/product="Atlg14920/F10B6_15"
	/protein_id="AAU25607.1"
	/db_xref="GI:16648834"
5'UTR	DVAKLEQLEVMNSNQEDDLISLATETVHYNPALYTLWDSMLTDLNPPSSNAEYDL
CDS	KAJPGDAILNQFALDSASSNQGGDTYTNKRLKCSNGWETTTATATSTRHVLY
	DSQNGVRLVLLACAEVQENLVAEALVKQIGFLAVSQIGAMRKVATYFAEALA
	RRYLRSPSPSIDHSLSDTLQMHFVETCPYLKFAHPTANQAILEAFQKKRVHVIDF
	SMOGLQWLPALMOALALRPGPPVFRITGIGPPAPDNFDYLVHEVGCKLAHLAEAIHVE
	FEYRFGVANTLADLDASMLRPSSEIVNSVFLHKLGLLRGKIDKVLGVVNOIK
	PELFTVVEQESNHSPIFLDRFTESLHYVSTLFDLSLEGVPSGODKVMSEVYLCKQICN
	VVACDGPDRVERHETLSQWRNREGSAGFAAHIGSNAFKQASMLLALFNGEGEYRVEE
	SDGLMLGWHIRPLIATSAWKLSTN"
3'UTR	1743. .2097
BASE COUNT	544 a 438 c 508 g 607 t
ORIGIN	
Query Match	94.4%; Score 1854.8; DB 8; Length 2097;
Best Local Similarity	99.2%; Pred. No. 0;
Matches 1875; Conservative	0; Mismatches 12; Indels 3; Gaps 1;
Qy	69 agtgaagtgaataaataaacttaagcagtccttaacgagatcccccgaagctaaagattcctt 128
Db	
1	ACTGGAGTGAATAAACAATACTTAAGCAGTCTTAACCGATCCCCCGAAGCTTAAGATTCTT 60
Qy	129 caccttccccataaagcaaaccttagatccgacattgaagagaaaaaaccttttagatcca 188
Db	
61	CACCTTCCCAATAAAGCAAAACCTAGATCGACATTGAAGGAAAAACCTTTTAGATCCA 120
Qy	189 tctctgaataaataaataaataaagagag--atcatcatcatcatcatacataaga 245
Db	
121	TCTCTGAAAAAAACCAACCATGAAGAGAGATCATCATCATCATCATCAAGATAAGA 180
Qy	246 agactatgatgatgaatgaagaagacgacgagtaacgagcagtgatgagcttctagctgttc 305
Db	
181	AGACTATGATGATCAATGAAGAACGACGCGTAACGCGATGGATGAGCTTCTAGCTGTT 240
Qy	306 ttggttacaaggttaggttcacatggtgaaatgctgagatgttctcagaataactcagcttgc 365
Db	
241	TTGTTTACAAGTTAGGTCATCCGAAATGGCTGATGTTGTCAGAAAACTCGAGCAGCTTG 300
Qy	366 aagttatgatgtctaatgttcaagaagacgagatcttctcaactcgcctacgagactgttc 425
Db	
301	AAGTTATGATGTCTAAATGTTCAAGAAAGACGATCTTCTCAACTCGCTACTGAGACTGTT 360
Qy	426 actataatccggcgaggtttacacgtggcttgattctatgctcaccgacgttaactcctc 485
Db	
361	ACTATAATCCGCGGAGCTTTACACGTGGCTTGATTCTATGCTCACCGACCTTAATCCTC 420
Qy	486 cgtcgttaacgcccagtgatcttaaaagctattcccgggtgacgagcttctcaatcagt 545
Db	
421	CGTCGCTTAACGCGGAGTACGATCTTAAAGCTATTCCCGGTGACGCGATCTTCAATCAGT 480
Qy	546 tcgctatcaggttcggttcttccttaacaaagcgagcgagagagatcagctatatacaaa 605
Db	
481	TCGCTATCGATTCGGCTTCTTCGTCTAACCAAGCGCGGAGAGATACGTATATACTACAA 540
Qy	606 acaagcgttgaaatgctcaaacggtcgttggaaccacacacagcagcgctgagtcac 665
Db	
541	ACAAGCGGTTGAATGCTCAACGCGCTGTTGGAACCACTACAGCAGCGCTGAGTCAA 600
Qy	666 ctggcgcatgttgcctcgtggttgcagagagcaggtgtgcttcgttcacagcgcttt 725
Db	
601	CTCGCATGTTGTCCTGTTGACTCGCAGGAGAACGGTGTGCGTCTCGTTCACGCGCTTT 660
Qy	726 tggcttcgctgaagctgttcagaagagaaatctgactgtggcgaagcttggtagaagc 785
Db	
661	TGGCTTCGCGTGAAGCTGTTCAGAAAGAGAAATCTGACTGTAGCGGAAGCTCTGGTGAAGC 720
Qy	786 aaatcgggattcttagctgtttctcaaatcggagcgtatgagaaaagtcgctactacttcg 845
Db	
721	AAATCGGATCTTAGCGGTTCCTCAATCGGAGCGATGAGAAAGTCGCTACTTACTTCG 780
Qy	846 ccgaagctctcgcgcgggatttaccgctctctcctcgcgcgcgcgcgcgcgcgcgcgc 905
Db	
781	CCGAAGCTCTCGCGCGGGGATTACCGTCTCTCTCCTCGTCGCGAGAGTCCAAATCGACCA 840
Qy	906 ctctctccgataactctcgaatgcactctcagagagcttctctctctcctcctcctcctc 965
Db	
841	CTCTCTCCGACTCTTTCAGATGCATCTTACGAGACTTGTGCTTATCTCAAGTTCGCTC 900

Db	550	GAGTCAACTCGGAGATGTTGCTCGGTGAGCTCGCAGGAGAACGGTGTGGCTCTCGTTCCAC	609
Qy	719	gcgcgttttggcttgcgcgtgaacgtgttcagaagagaaatctgaactgtggcggaagcgtctg	778
Db	610	GCgcgttttggcttggcgtgaacgtgttcagaagagaaatctgaactgtggcggaagcgtctg	669
Qy	779	gtgaagcaaatcggaattcttagctgtttctcacaatcggagagctatgagaaaagtcgtact	838
Db	670	GTGAAGCAAAATCGAATCTTATAGTGTGTTTCTCAAAATCGGAGCTATGAGAAAAAGTCGCTACT	729
Qy	839	tacttcgcgaagactctcgcgggcgagattaccgtctctctcgtcgacagagtcacaac	898
Db	730	TACTTTCGCCAAGACTCTCGCGGGCGGATTTACCGTCTCTCTCGTCGACAGAGTCCAATC	789
Qy	899	gaccactctctccgatactcttcagatgcacttctacgagactgtcccttatctcaga	958
Db	790	GACCACCTCTCTCCGATACTCTTTAGATGCACTTCTACGAGACTTGTCTTATCTCAAG	849
Qy	959	ttcgctcaacttcacggcgaaatcaacggaattctcgaagcttttcaagggaagaaaaagatt	1018
Db	850	TTCGCTCACTTCAACGGCGAATCAAGCGATCTCTCGAAGCTTTTCAAGGGGAAGAAAGAGTT	909
Qy	1019	catgtcatgtattctctatgagtcgaaggtcttcgaatggcgcggcgcttatgcaagctctt	1078
Db	910	CATGTCAATGATTCTCTATGAGTCAAGGCTCTCAATGCCGGCGCTTATATCAGGCGCTTT	969
Qy	1079	gcgctcgacgtggtgctcctctgttttccgggttaacggaaattggtccaccggcacccg	1138
Db	970	GCgcttcgacctggctggctcctcctgtttttccggtttaacgggaattggtccaccggcacccg	1029
Qy	1139	gataattcgattatctcatgaagtggggtgaagctggctcatttagctgagcgcat	1198
Db	1030	GATAAATTCGATTATCTCATGAAGTTGGTGTAAGCTGGCTCATTTAGCTGAGCGCAT	1089
Qy	1199	caagctgagtttagtacagagatttggctcaacacttagctgatcttgatgcttcg	1258
Db	1090	CAGCTTGAGTTTGAGTACAGAGATTGTGGCTTAACACTTTAGTGTGATTTGATGTCTCG	1149
Qy	1259	atgcttgagcttagaccaagtagaattgaactgttgcggttaactctgtttctcgagctt	1318
Db	1150	ATGCTTGAGCTTAGACCAAGTGAGATTGAATCTGTTGCGGTTAACTCTGTTTTTCGACGTT	1209
Qy	1319	cacaagctcttgggacgacctggctgcgataaggttcttgggtggtgtaacacagatt	1378
Db	1210	CACAAGCTTTGGACGACCTGGTGCgATCGATAAGGTCTTGGTGTGGTGAATCAGATT	1369
Qy	1379	aaaccggagatttctactgtgttagcaggaagaatcgaaccataatagtcgagatttctta	1438
Db	1270	AAACCGGAGATTTTCACTGTGTTGAGCAGGAATCGAACCATAAATAGTCCGATTTTCTTA	1329
Qy	1439	gatcggttactgagtcgttgcatattactcgacgttgtttagctcgttggaaagtgta	1498
Db	1330	GATCGGTTTACTGAGTCGTTTGCAATTAATTACTCGACGTTGTTTGACTCGTGGAAAGHTGA	1389
Qy	1499	ccgagtggttcaagacaagtcatctcgaggttttacttgggttaaacagatctgcaacggt	1558
Db	1390	CCGAGTGGTCAAGACAAGTCACTGTCGGAGGTTTACTTTGGGTAAACAGATCTGCAACGTT	1449
Qy	1559	gtggcttgatgagcaactgaccgagttgagcgatcaataaaacggttgagtcagtgaggaac	1618
Db	1450	GTGGCTGTGATGGAGCTGACCGAGTTGAGCGTCAATGAACGTTTGAAGTGGAGGAAC	1509
Qy	1619	cggttcgagcttactgggttttgcgctcacatatgttgcgaatcggtttaagcaagcg	1678
Db	1510	CGGTTCCGGGTCTGCTGGGTTTCGGGCTGCACATAATGGTTTCGAATGGCTTTAAGCAAGCG	1569
Qy	1679	agtatgcttttggctctgttcaacggcggtgagggttatccgggtggaagagagtgacgac	1738
Db	1570	AGTATGCTTTGGCTCTGTTCAACGGCGGTGAGGGTTATCGGGTGGAGGAGATGACGGC	1629
Qy	1739	tgctcatgttggg	1752
Db	1630	TGTCTCATGTTGGG	1643

RESULT	8	ARI74880	Sequence 3 from patent US 6307126.	1643 bp	DNA	linear	PAT 17-DEC-2001
LOCUS		ARI74880					
DEFINITION		Sequence 3 from patent US 6307126.					
ACCESSION		ARI74880					
VERSION		ARI74880.1	GI:17915200				
KEYWORDS		Unknown.					
SOURCE		Unknown.					
ORGANISM		Unclassified.					
REFERENCE		1 (bases 1 to 1643)					
AUTHORS		Harber, N.P., Peng, J., Richards, D.E. and Carol, P.					
TITLE		Nucleic acid encoding GAI gene of Arabidopsis thaliana					
JOURNAL		Patent: US 6307126-A 3 23-OCT-2001;					
FEATURES		Location/Qualifiers					
source		1..1643					
BASE COUNT		405 a 359 c 423 g 456 t					
ORIGIN							
Query Match		80.5%; Score 1580.4; DB 6; Length 1643;					
Best Local Similarity		96.9%; Pred. No. 0;					
Matches 1642; Conservative		0; Mismatches 1; Indels 51; Gaps 1;					
Qy	59	tagaagtgtgtagtgagtgaaacacaaatcctaaagcagtcgttaacgcagatcccgaaagct	118				
Db	1	TAGAAGTGGTAGTGGAGTGAACAAACAAATCCTTAAGCAGTCCTTAACCGATGCCCGAAGCT	60				
Qy	119	aaagattcttcaccttcccaataaagcaaacctagatccgcattggaaggaaaaacct	178				
Db	61	AAAGATTCTTCACCTTCCCAATAAAGCAAAACCTAGATCCGACATTGAAGGAAAAACCT	120				
Qy	179	tttagatccatctctgaaaaaaacccacccatgaaagagagatcatcatcatcatcaa	238				
Db	121	TTTAGATCCATCTCTGAAAAAAACCACCATGAAGAGAGATCATCATCATCATCAACAA	180				
Qy	239	gataagaagactatgatgatgaatgaagaagacacaggttaacgcagcatggatgactctta	298				
Db	181	GATAAGAAGACTATGATGATGAATGAAGAGACGACGCGTAAACGCGATG-----	228				
Qy	299	gctgtcttggttacaaagggttagtgatcctcgaaatggtctgattgtgtctcgaaactcgag	358				
Db	229	-----GATGTTGTCAGAAACTCGAG	249				
Qy	359	cagctgaagttatgattctaatgttcaagaagacatctttcgaactcgctactcgag	418				
Db	250	CAGCTTGAAGTTATGATGTCATATGTTCAAGAACGACATCTTCTCAACTCGCTACTTGAG	309				
Qy	419	actgttcaactataatccggcgagcctttacacgtgggttattctatgctcacgcacctt	478				
Db	310	ACTGTTCACTATAATCCGGCGAGCTTTACACGTGGCTTGATTCATGCTCAACGACCTT	369				
Qy	479	aatcctccgtgtctaacgcgcgcagcagatcttaaaactattcccgggtgacgcgattctc	538				
Db	370	AATCCTCCGTCTGCTAACGCGGAGTACGATCTTAAAGCTATTCCCGGTGACGCGATTCTC	429				
Qy	539	aatcagttcgtctatcgtattcggctcttcgtctaaacaaaggcgcgcgcagagagatcacat	598				
Db	430	AATCAGTTCGCTATCGATTTCGGCTTCTTCGCTCAACAGCGCGGAGGAGATACGAT	489				
Qy	599	actcaaacagcggttgaatgctcaaacggcgctctggaaaccacccacagcgagcgct	658				
Db	490	ACTACAACAAAGCGTTGAATGCTCAACAGCGCGCTCGTGGAAACACACACAGCGACGCT	549				
Qy	659	gagtcaactcgcgcgattgttctcgtggtgactcgcagagagaacgggtgctgtctcgttccac	718				
Db	550	GAGTCAACTCGGCATGTTGCTCCTGGTTGACTCGCAGAGAACGGGTGTCGCTCTCGTTTAC	609				
Qy	719	gcgcttltggcttgcgctgaagctgttctcagaagagagaatctgactgtggcgcgaagctctg	778				

Db 610 CGCGTTTGGCTTGGCTGAAGCTGTTTCAGAAAGAGAAATCTGACTGTGGCGGAAGCTCTG 669
Qy 779 gtgaagcaaatcgattcttagcttctcaaatcgagctatgagaaagtcgact 838
Db 670 GTGAAGCAAAATCGATCTTAACTGTTTCTCAATCGGAGCTATGAGAAAAGTCGCTACT 729
Qy 839 tactcgccgaagctctcgccgagcttaccgctctctccgctcgagagctcaatc 898
Db 730 TACTTCCGCGAAGCTCTCGCGCGGAGTTTACCGTCTCTCTCGCTGCGAGATCCCAATC 789
Qy 899 gaccactctctccgatactctcaatcagcttccactctcacagacttctcttactcaag 958
Db 790 GACCACCTCTCTCCGATACCTTTTAGATGACCTCTACGAGACTTGCTCTTACTCTCAAG 849
Qy 959 ttctgctcaactcagcggaatcaagcagcttctcgaagcttcttcaagggaagaaagagtt 1018
Db 850 TTCGCTCACTTACCGCGCAATCAAGCGATTCTCGAAGCTTTTCAAGGGAAGAAAGAGTT 909
Qy 1019 catgtcattgattctctatagtcgaaggtcttcaatggccggcgcttatcgaggtcttt 1078
Db 910 CATGTCATTGATTCTCTATGAGTCAAGGTCTTCAATGGCGCGGCTTATGCAAGGCTCTT 969
Qy 1079 gcgtctgacactggtgctcctctgtttccggttaaccggaattggtccaccggcaccg 1138
Db 970 CGGTTGACCTGTTGCTCTCTCTTTCGGTTTACCGGAATTGTTCCACCGCACCG 1029
Qy 1139 gataattcgattatcttcatgaagtgggtgtaagctggctcatttagctgagcgctt 1198
Db 1030 GATAAATTCGATTATCTTATGAGTGAAGTTGGGTCTAAGCTGGCTCATTTAGCTGAGCGGATT 1089
Qy 1199 cagctgaagtttgagtcagagagatttggtgctaacacttttagctgattcgtgcttgcg 1258
Db 1090 CACGTTGAGTTGAGTACAGAGGATTTGTGGCTAACACTTTAGCTGATCTTTGATGCTTCG 1149
Qy 1259 atgctgagcttagacaagtgagatgaactctgttcggttaactctgttttcgagctt 1318
Db 1150 ATGCTTGAGCTTACACCAAGTGAGATTGAATCTGTTGCGGTTAACTCTGTTTCGAGCTT 1209
Qy 1319 cacaagctcttgggacacactggtgcgagatgaaggtcttctgtggtggaatcagatt 1378
Db 1210 CACAAGCTCTTGGGACGACCTTGGTCGATCGATGAAGGTTCTTGGTGGTGAATCAGATT 1269
Qy 1379 aaacggaagatttcactgtgttgagcaggaatcgaacataatagctcagatttctta 1438
Db 1270 AAACCGGAGATTTTACCTGTGTGAGCAGGAATCGAACCATATATAGTCCGATTCTCTTA 1329
Qy 1439 gatcggttactgagctgttcatttactcgcgctgttctgactcgttgcgaggtgta 1498
Db 1330 GATCGGTTTACTGAGTCGTTGCATTATTTACTCGACGTTGTTTGACTCGTTGGAAGGTGA 1389
Qy 1499 ccgagtggaacgaaggtcagtcgagaggttacttcttggtggaacagatctgcaacgtt 1558
Db 1390 CCGAGTGGTCAAGACAAGGTCATGTCGAGGTTTACTTGGGTAACAGATCTGCAAGCTT 1449
Qy 1559 gtgcttgatgacactgacaggttagcgttcataaagcttgagctcagtgaggaac 1618
Db 1450 GTGCTGTGTGATGACCTGACCGAGTTGAGCGTTCATGAAACGTTGAGTCAAGTGAAGAAC 1509
Qy 1619 cggttcgggtctggtgttggcggtgcacataattggttcgaatgctgtttaaagcaagcg 1678
Db 1510 CGGTTCCGGTCTGCTGGTTTGGCGTGCACATATTGTTGCAATGCTTTAAACAAGCG 1569
Qy 1679 agtatgttttggctctgttcaacggtgaggttatcgggttgagagagagtgacggc 1738
Db 1570 AGTATGCTTTTGGCTCTGTTTCAACGGCGGTGAGGTTTATCGGTTGAGGAGAGTGACGGC 1629
Qy 1739 tgtctcatgttggg 1752
Db 1630 TGTCTCATGTTGGG 1643

RESULT 9
A64701

LOCUS A64701 1642 bp DNA linear PAT 29-MAR-1999
DEFINITION Sequence 5 from Patent WO9729123.
ACCESSION A64701
VERSION A64701.1 GI:4530764
KEYWORDS thale cress.
SOURCE Arabidopsis thaliana
ORGANISM Arabidopsis thaliana
REFERENCE 1 (bases 1 to 1642)
AUTHORS Harberd,N.P., Peng,J., Carol,P. and Richards,D.E.
TITLE NUCLEIC ACID ENCODING GAI GENE OF ARABIDOPSIS THALIANA
JOURNAL Patent: WO 9729123-A 5 14-AUG-1997;
INNES JOHN CENTRE INNOV LTD (GB)
COMMENT Other publication AU 1799697 19970828.
FEATURES
Location/Qualifiers
source
1..1642
/organism="Arabidopsis thaliana"
/strain="LANDSBERG ERECTA"
/db_xref="taxon:3702"
/chromosome="1"
/map="20.9"
/haplotype="GAI-D2"
BASE COUNT 405 a 360 c 423 g 454 t
ORIGIN
Query Match 79.9%; Score 1570; DB 6; Length 1642;
Best Local Similarity 96.9%; Pred. No. 0;
Matches 1642; Conservative 0; Mismatches 0; Indels 52; Gaps 2;
Qy 59 tagaagtggtagtgagtgaaacaaatccttaagcagtccttaacccgatacccgaaagct 118
Db 1 TAGAAGTGGTAGTGGAGTGAACAAATCCTTAAGCAGTCCTAACCGATCCCGGAAGCT 60
Qy 119 aaagattcttcacctctcccaataaagaacaaacctagatccgacatgaaggaaaaacct 178
Db 61 AAAGATTCTTTCACCTTCCCAATTAAGCAAAACCTTAGATCGGACATTTGAAGGAAAAACCT 120
Qy 179 tttagatccatctctgaaacaaacacacatgaagagatcatcatcatcatcaaa 238
Db 121 TTTAGATCCATCTCTGAACCAACCAACCATGAAGAGAGATCATCATCATCATCAA 180
Qy 239 gataagaagactatgatgtaatgaagaagacgaggttaacggcatggatgagcttcta 298
Db 181 GATAAAGAAGACTATGATGATGAATGAAGAAGACGACGCTAACGGCATG----- 228
Qy 299 gctgttcttggttacaaaggttaggtcatcgaaatggtgctgattgttgcataaactcgag 358
Db 229 -----GATGTTGCTCAGAAACTCGAG 249
Qy 359 cagctgaagtattgatgtctaatgttcaagaagacgactcttctcaactcgctactgag 418
Db 250 CAGCTTCAAGTTATGATGCTTAATGTTCAAGACACGATCTTCTCAACTCGCTACTGAG 309
Qy 419 actgttcaactataatccggcgagctttacacgtgggttattcttatgctacacgacctt 478
Db 310 ACTGTTCACTATAATCCGGCGGAGCTTTACACGTGGCTTGATTCTATGCTCACCGAGCTT 369
Qy 479 aatcctccgctcgctaaacgagctacgactctaaagctattcccggtgacgagattctc 538
Db 370 AATCCTCCGCTGCTAAACCGCGAGTAGATCTTAAAGCTATTCCCGGTGACCGGATTCTC 429
Qy 539 aatcagttcgtactcgtattcggcttcttcttcaacaaaggcgagcgagagatacagtat 598
Db 430 AATCAGTTGCTATCGATTTCGGCTTCTTCGTTTAAACCAAGGCGGAGGAGATACGTAT 489
Qy 599 actacaacaaggggttgaatgctcaacggttcgttgaacacacacacagagagacctt 658
Db 490 ACTACAAACAAGCGGTTGAAATGCTCAACGGCGCTCGTGGAAACACACACAGCGACGGCT 549
Qy 659 gagtcaactcgagcatgttgcctcgttgactcgcaggaagaacggtgtgctctcgttcaac 718

```

|||||
550 GAGTCAACTCGGCATGTGTCTCTGTTACTCGCAGGAGAACGGTGTGCGTCTCGTTCCAC 609
|||||
719 qcgcttttggcttcgcctgaagctgttcagaagagaaatctgacttgagcgaagactcg 778
|||||
610 GCGCTTTTGGCTTGGCTGGAAGCTGTTCAGAAAGAGAACTTGACTGTGGCGGAAGCTGTG 669
|||||
779 gtagaagcaaatcggaattcttagctgtttctcaaatcgagagctatgagaagagtcgctact 838
|||||
670 GTGAAGCAAAATCGGATTTAGCTGTTCCTCAAAATCGAGCTATGAGAAAGTCGCTACT 729
|||||
839 taactcgccgaagctctcgcgcgagattaccgctctctctctcgttcgctcgagagtcacaac 898
|||||
730 TACTTTCGCCGAAGCTCTCGCGCGGAGATTACCGTCTCTCTCCGTTCGCGAGAGTCCAATC 789
|||||
899 gaccactctctctccgatactcttcacagcttcacagacttcacagacttgctcttactcaag 958
|||||
790 GACCACCTCTCTCCGATCTTTCAGATGCACCTTCTACGAGACTTGTCTTATCTCAAG 849
|||||
959 ttgcgtcaacttcacggaatcaagcgattctcgaagcttttcaagggaaagaaaagatt 1018
|||||
850 TTCGCTCACTTACGGCGAATCAAGCGATTCTCGAAGCTTTTCAAGGGAAGAAAAGATT 909
|||||
1019 catgcatgattctctatgaagcaaggtcttcaatggcggcgcttatgcaagctctt 1078
|||||
910 CATGTCATTGA-TTCTCTATGAGTCAAGGCTTCAATGGCGCGGCTTATGCAAGGCTCTT 968
|||||
1079 qcgcttcgacctggtgctcctctgtttccgggttaacgggaattggtccaccggcaccg 1138
|||||
969 GCGCTTCGACCTGGTGTCTCTCTGTTTCCGGTTTACCGGAATTGCTCACCGGCACCG 1028
|||||
1139 gataattctgattattctcatgaagttgggtgaagctggtcatttagctgagcgatt 1198
|||||
1029 GATAAATTCGATTATCTTTCATGAAGTTGGGTGAAGCTGCTCATTTAGCTGAGCGGATT 1088
|||||
1199 cagcttgagtttgatcacagagatttggtggttaacacttttagctgacttgatgcttcg 1258
|||||
1089 CAGCTTGAGTTTGAGTACAGAGGATTGTGGCTTAACACTTTAGCTGATCTTGATGCTTCG 1148
|||||
1259 atgcttgagcttagaccaagtggagatgaactctgttcggttaactctgttttcgagctt 1318
|||||
1149 ATGCTTGAGCTTAGACCAAGTAGATTTGAATCTGTCGGGTAACTCTGTTTTCGACCTT 1208
|||||
1319 cacaagctcttggagacacctggtgcgcatgcgataaggttcttgggttggtgaatcagatt 1378
|||||
1209 CACAAGCTCTTGGACGACCTGGTGCATCGATCGATAAGGTTCTTGGTGTGGTGAATCAGATT 1268
|||||
1379 aaaccggagattttcactggttgagcaggaatcgaaacataatagtcgatttttctta 1438
|||||
1269 AAACCGGAGATTTTCACTGTGTTTGAGCAGGAATCGAACCAATAATAGTCCGATTTTCTTA 1328
|||||
1439 gatcggtttactgagtcgttgcatattactcgacgtgtgttgactcgttgggaaggtgta 1498
|||||
1329 GATCGGTTTACTGAGTCGTTGCATTATTACTCGACGTTGTTTGACTCGTTGGGAAGGTGA 1388
|||||
1499 ccgagtggttcaagacaaggttcactgtagggtttacttgggttaaacagatctgcaacggt 1558
|||||
1389 CCGAGTGGTCAAGACAAGGTCATGTCGGAGGTTTACTTGGGTAAACAGATCTGCAACGTT 1448
|||||
1559 gtggtcttgatggacctgaccgagttgagcgtcatgaaacggttgagtcagtgaggaac 1618
|||||
1449 GTGGCTTGTGATGAGACCTGACCGAGTTGAGCGTCATGAAACGTTGAGTCAGTGGAGGAAC 1508
|||||
1619 cgttcgggtctactgaggtttcggttcgacatatgttgcgaatcggttttaagcaagcg 1678
|||||
1509 CGGTTCCGGGTCTGCTGGGTTTGGCGGTGCACATATTGTTGGAATCGGTTTAAAGCAAGCG 1568
|||||
1679 agtatgcttttggctctgttcaacggcggtgaggggttatcggttgaggagagtgacgqcg 1738
|||||
1569 AGTATGCTTTTGGCTCTGTTCAACGGCGGTGAGGGTTATCGGGTGGAGGAGATGACGGC 1628
|||||
1739 tgtctatggttggg 1752
|||||
```

```

Db 1629 TGTCTCATGTTGGG 1642

RESULT 10
LOCUS A64705
DEFINITION Sequence 9 from Patent WO9729123.
ACCESSION A64705
VERSION A64705.1 GI:4530766
KEYWORDS
SOURCE thale cress.
ORGANISM Arabidopsis thaliana
            Sequoyia; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
            Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsi.
REFERENCE 1 (bases 1 to 1642)
AUTHORS Harberd,N.P., Peng,J., Carol,P. and Richards,D.E.
TITLE NUCLEIC ACID ENCODING GAI GENE OF ARABIDOPSIS THALIANA
JOURNAL Patent: WO 9729123-A 9 14-AUG-1997;
COMMENT INNES JOHN CENTRE INNOV LTD (GB)
FEATURES Other publication AU 1799697 19970828.
            Location/Qualifiers
                source
                    1..1642
                        /organism="Arabidopsis thaliana"
                        /strain="LANDSBERG ERECTA"
                        /db_xref="taxon:3702"
                        /chromosome="1"
                        /map="20.9"
                        /haplotype="GAI-D7"
BASE COUNT 405 a 360 c 423 g 454 t
ORIGIN

Query Match 79.9%; Score 1570; DB 6; Length 1642;
Best Local Similarity 96.9%; Pred. No. 0;
Matches 164; Conservative 0; Mismatches 0; Indels 52; Gaps 2;

Qy 59 tagaagtggttagtgagtgaaaaacaaatccctaagcagtcctaaacccgactcccccgaagct 118
Db 1 TAGAAGTGGTAGTGAGTGAGTGAATAAACAAATCCTTAAGCAGTCTTAACCGATCTCCCGAAGCT 60
Qy 119 aaagattcttcaaccttcccaataaagcaaaacctagatccgcacattgaaggaaaaacct 178
Db 61 AAAGATTCTTTCACCTTCCCAATAAACAAACCTTAGATCCGACATTTGAAGAAAAAACCT 120
Qy 179 tttagatccatctctgaaaaaaccaaccatgaagagagatcatcatcatcatcaaa 238
Db 121 TTTAGATCCATCTCTGAAAAAACCAACCATGAAGAGAGATCATCATCATCATCAA 180
Qy 239 gataagaagactatgatgaatgaagaagacgacggtaacggcatgggatgagcttcta 298
Db 181 GATAAAGAAGACTATGATGATGAATGAAGAAGACGCGTAACGGCATG----- 228
Qy 299 gctgttcttggttacaaaggttaggtcatcggaataaggtgatgttgcctagaacactcgag 358
Db 229 -----GATGTTGCTCAGAACTCGAG 249
Qy 359 cagcttgaagtatgatgtctaatttcaagaagacgatcttttcaactcgctactgag 418
Db 250 CAGCTTGAAGTTATGATGTCTAATGTTCAAGAAAGCATCTTTCTCAACTCGCTACTGAG 309
Qy 419 actgttcactataatccggcgagactttcacgctgggttatttcttatgctcaccgacctt 478
Db 310 ACTGTTCACTATATAATCCGGCGGAGCTTTACACGTGGCTTGATTCTATGCTCACCAGCTT 369
Qy 479 aatctccgtctgcttaacgcgcgagtagcgaattttaaagctattcccggtgacgcgattctc 538
Db 370 AATCCTCCGTCGTAAACGCGGAGTAGCATCTTAAAGCTATTCCCGGTGACGCGATTCTC 429
Qy 539 aatcagttcgtcatcgattcggtcttcttcgcttaaccgaagcgcgagagagatacgtat 598
Db 430 AATCAGTTCGCTATCGATTGCGCTTCTTCGTTCTTAACCAAGCGCGGAGAGATACGTAT 489
```

Qy	599	actacaaacaagcggttgaaatgctcacaacggcgctggtgaaacacacacacagcagcgctt	658
Db	490	actacaaacaagcggttgaaatgctcacaacggcgctggtgaaacacacacacagcagcgctt	549
Qy	659	gagtcgaactcggcatgtgctcgtggtgactcgcgagggaacgggtgctgctcgtcgttcac	718
Db	550	gagtcgaactcggcatgtgctcgtggtgactcgcgagggaacgggtgctgctcgtcgttcac	608
Qy	719	gcgcttttggcttgcgctgaagctgttcgaaggagaatcctgactctggtggggaagctctg	778
Db	609	gcgcttttggcttgcgctgaagctgttcgaaggagaatcctgactctggtggggaagctctg	668
Qy	779	gtgaagcaaatcggatcttagctgttctcaaatcggagctatgagaaagtgcgctact	838
Db	669	gtgaagcaaatcggatcttagctgttctcaaatcggagctatgagaaagtgcgctact	728
Qy	839	tacttcgcgaagctctcgcggcgagttaccgctctctcctcgcgcagagtgccaatc	898
Db	729	tacttcgcgaagctctcgcggcgagttaccgctctctcctcgcgcagagtgccaatc	788
Qy	899	gacgaactctctccgatactcttcagatgcaactctctacgagaactgtccttatctcaag	958
Db	789	gacgaactctctccgatactcttcagatgcaactctctacgagaactgtccttatctcaag	848
Qy	959	ttcgctcaacttcacggcggaatcaacggattctcgaagcttttcaagggaagaaagagtt	1018
Db	849	ttcgctcaacttcacggcggaatcaacggattctcgaagcttttcaagggaagaaagagtt	908
Qy	1019	catgtcaattgattctctatgagtcgaaggtctcgaatggcggcgcttatgcaggctctt	1078
Db	909	catgtcaattgattctctatgagtcgaaggtctcgaatggcggcgcttatgcaggctctt	968
Qy	1079	gcgcttcgacctgggtgctcctcgtgtttccgggttaacggaaattggtccacacgggacgg	1138
Db	969	gcgcttcgacctgggtgctcctcgtgtttccgggttaacggaaattggtccacacgggacgg	1028
Qy	1139	gataatttcgattatctctcatgaagttgggtgtaagctggctcatttagctgaggcgatt	1198
Db	1029	gataatttcgattatctctcatgaagttgggtgtaagctggctcatttagctgaggcgatt	1088
Qy	1199	cagcttgagtttgagtcagagagatttggtggtcaacactttagctgacttgatgctgtcg	1258
Db	1089	cagcttgagtttgagtcagagagatttggtggtcaacactttagctgacttgatgctgtcg	1148
Qy	1259	atgcttgagcttagaccaagtgagatgaatctgttcggttaactctgttttcgagctt	1318
Db	1149	atgcttgagcttagaccaagtgagatgaatctgttcggttaactctgttttcgagctt	1208
Qy	1319	cacaagctcttgggaagcaactggtcgagatcgataaggtcttggtgtggtgaatcagatt	1378
Db	1209	cacaagctcttgggaagcaactggtcgagatcgataaggtcttggtgtggtgaatcagatt	1268
Qy	1379	aaaccggagattttcacttggttgagcaggaatcggaaccataatagtcogattttctta	1438
Db	1269	aaaccggagattttcacttggttgagcaggaatcggaaccataatagtcogattttctta	1328
Qy	1439	gatcgtgttactgagtcgttgcatctattactcgcagcttggtttgactcgttgggaagtgta	1498
Db	1329	gatcgtgttactgagtcgttgcatctattactcgcagcttggtttgactcgttgggaagtgta	1388
Qy	1499	ccgagtggttcaagacaagctatgctcgaaggtttacttggtgaacagactctcaacgctt	1558
Db	1389	ccgagtggttcaagacaagctatgctcgaaggtttacttggtgaacagactctcaacgctt	1448
Qy	1559	gtggcttgtagtggaacctgaccgagttgagcgtaatgaacagcttgagtcagtgagggaac	1618
Db	1449	gtggcttgtagtggaacctgaccgagttgagcgtaatgaacagcttgagtcagtgagggaac	1508
Qy	1619	cggttcgagctcgtcgtggtttgcgctcacatattggttcgaatcggtttaacgaagcg	1678
Db	1509	cggttcgagctcgtcgtggtttgcgctcacatattggttcgaatcggtttaacgaagcg	1568
Qy	1679	agtatgcttttggtcgtgttcaacggcggtgagggttatcggttggaagagagtgacgcgc	1738

Db	1569	AGTATGCTTTTGGCTCTGTTTCAACGGCGGTGAGGGTTATTCGGGTGGAGGAGATGACGGC	1628
Qy	1739	tgtctcatgttggg	1752
Db	1629	TGTCATCATGTGGG	1642
RESULT 11			
AR174881			
LOCUS	AR174881	1642 bp	DNA linear PAT 17-DEC-2001
DEFINITION	Sequence 5 from patent US 6307126.		
ACCESSION	AR174881		
VERSION	AR174881.1	GI:17915201	
KEYWORDS			
SOURCE	Unknown.		
ORGANISM	Unknown.		
REFERENCE	Unclassified.		
AUTHORS	1 (bases 1 to 1642)		
TITLE	Harberd,N.P., Peng,J., Richards,D.E. and Carol,P.		
JOURNAL	Nucleic acid encoding GAI gene of Arabidopsis thaliana		
FEATURES	Patent: US 6307126-A 5 23-OCT-2001;		
	Location/Qualifiers		
	1..1642		
	/organism="unknown"		
BASE COUNT	405 a	360 c	423 g 454 t
ORIGIN			
Query Match	79.9%;	Score 1570;	DB 6; Length 1642;
Best Local Similarity	96.9%;	Pred. No. 0;	
Matches 1642;	Conservative 0;	Mismatches 0;	Indels 52; Gaps 2;
Qy	59	tagaagtgtagtgagtgagaaacaaacaaatcctaagcagtccttaacgcgacatcccccgaagct	118
Db	1	TAGAAGTGGTAGTGGAGTGAACAAAACAAATCCTAAGCAGTCCTAACCGATCCCGAAGCT	60
Qy	119	aagagattctcaccttcccataaataaaccaaacctaagactagatccgacattgaaggaaacact	178
Db	61	AAAGATTCTTACCTCTCCCAATTAAGCAAAACCTAGATCCGACATTTGAAGGAAAAACCT	120
Qy	179	tttagatccactctctgaaaaaaccaaccatgaagagagatcatcatcatcatcaacaa	238
Db	121	TTTAGATCCATCTCTGAAAAAACAACCAACCATGAGAGAGATCATCATCATCATCAACAA	180
Qy	239	gataagaagactatgatgatgatgaagaagacagcggttaacggcatggtatgagctteta	298
Db	181	GATAAAGAAGACTATGATGATGATGAATGAAGAAGACGACGCGTAAGGCGATG-----	228
Qy	299	gctgttcttggttacaagggttaggttcacatcgaaatgctgatgttgctcagaagaactcgag	358
Db	229	-----GATGTTGCTCAGAAACTCGAG	249
Qy	359	cagcttgaagttatgatgtcttaatttcaagaagacgatcttttcaactcgctactcgag	418
Db	250	CAGCTTGAAGTTATGATGTTCTAATGTTTCAAGAAGACGATCTTCTCAACTCGCTACTTGAG	309
Qy	419	actgttcactataatccggcgagcgtttacacgttggttattctatgctcacgcgacctt	478
Db	310	ACTGTTCCATATAATCCGGCGGAGCTTTACACGTGGCTTGATTTCTATGCTCACCGACCTT	369
Qy	479	aatctcgcgtcttaacgcgcgagtaacatcttaaaactattcccgggtgacgcgatcttc	538
Db	370	AATCCTCCGTGCTTAACGCGGAGTAGCATCTTAAAGCTATTCCCGGTGACGCGATTCTC	429
Qy	539	aatcagttcgtctatcgattccggtcttcttcgtctaaacaaagcgcgaggagagatacagtat	598
Db	430	AATCAGTTCGCTATCGATTTCGGCTTCTTCGTCTPAACCAAGGCGGAGGAGATACGTAT	489
Qy	599	actacaacaagogggttgaatgctcaaacgvgctctggaacccaccacagcgacggct	658
Db	490	ACTACAAACAAGCGGTTGAATGCTCAACGGCGCTCGTGGAAACCAACACGACGACGCGCT	549

Qy 659 gagtcaactcggcaatgttgctctggtgactcgcagagaaacggtgctgctcgttccac 718
Db 550 GAGTCAACTCGGCATGTGTCTCGTGAAGTTCGACGAGGAGAACGGTCTCGTTCAC 609
Qy 719 qcgttttgcctgcctgaagctgttcaaaagagaatctgactgtgaggaagctcg 778
Db 610 GCGCTTTTGGCTTGGCTGAAGCTGTTCAGAAGGAGAACTGACTGTGGCGGAAGCTCTG 669
Qy 779 gtgaagcaaatcggattcttagctgtttctcaaatcggagctatgagaaagtgcgtact 838
Db 670 GTGAAGCAAAATCGGATCTTAGCTGTTCATCAATCGAGCTATGAGAAAGTCGCTACT 729
Qy 839 tacttcgcaagctctcgcgcgcgcgagattaccgtctctctcgtcgcagagtcacaac 898
Db 730 TACTTTCGCCGAAGCTCTCGCGCGCGGATTTACCGTCTCTCTCGTCGCAGAGTCCAATC 789
Qy 899 gaccactctctccgatactcttcacacttcacagacttcacagacttcttactcaag 958
Db 790 GACCACHTCTCTCCGATACTCTTCAGATGCACHTCTACGAGACTTGTCTTATCTCAAG 849
Qy 959 ttgcgtcaacttcacggcgaatcaagcgattctcgaaagcttttcaagggaagaaagatt 1018
Db 850 TTGCCTCCTTACGCGGCAATCAAGCGATCTTCAAGCTTTTCAAGGGAAGAAAGATT 909
Qy 1019 catgtcaattctctctatgagtcaggctctcaatgcccgcgcttatgcaggctctt 1078
Db 910 CATGTCAATTGA-TTCTCTATGAGTCAAGGTCTTCAATGGCGGCGCTTATGCAAGCTCTT 968
Qy 1079 qcgttcgacctggtgctcctcgtttccggttaacggaaattggtccaccgcgcacg 1138
Db 969 GCGCTTCGACCTGGTGCTCTCTGTTTCCGGTTTAAACCGAATGGTCCACCGGCACCG 1028
Qy 1139 gataatttcgattatcttcgaagttgggtgaagctggtctcatttagctgagcgatt 1198
Db 1029 GATAAATTCGATTATCTTCATGAATGGGTGTAAGCTGCTCATTTAGCTGAGCGCAT 1088
Qy 1199 caggtgagttgagtcagagagatttggtgtaaacactttagctgacttgatgctcg 1258
Db 1089 CAGCTTGAGTTTGAGTACAGAGGATTTGTGGCTTAACACTTTAGCTGATCTTGATCTCG 1148
Qy 1259 atgcttgagcttagaccaagtgagattgaatctgttcggttaactctgttttcgagctt 1318
Db 1149 ATGCTTGAGTTAGACCAAGTGAGATTGAATCTGCTCGGTTAACTCTGTTTTCGACCT 1208
Qy 1319 cacaagctcttggagacacgtggtgcgatacgataaggttcttgggtggtggaatcagatt 1378
Db 1209 CACAAGCTCTTGGACGACCTGGTGCATCGATAAAGTCTTGGTGTGTTGAATCAGATT 1268
Qy 1379 aaaccgagagattttcactgtggttgagcaggaatcgaaccataatagtcgatttttta 1438
Db 1269 AAACCGGAGATTTTCACTGTGGTTGAGCAGGAATCGAACCATAATATGCTCGATTTTCTTA 1328
Qy 1439 gatcgggttactgagtcgttgatttacttcacgctgttctgactcgttggagagtgta 1498
Db 1329 GATCGGTTTACTGAGTCGTTGCATTATTACTCGACGTTGTTGACTCGTTGGAGGTTGA 1388
Qy 1499 ccgagtggtcaagacaaggttcabtgctggaggtttacttgggttaaacagatctgcaacgtt 1558
Db 1389 CCGAGTGGTCAAGACAAGGTCATGTCGGAGGTTTACTTGGGTAAACAGATCTGCAACGTT 1448
Qy 1559 gtggtctgtgatggacctgaccgagttgagcgtcaatgaacagttgagtcagtgaggagac 1618
Db 1449 GTGGCTTGTGATGGACCTGACCGAGTTGAGCGTCATGAACGTTGAGTCAGTGGAGGAAC 1508
Qy 1619 cgggtcgggtctcgtggttgcgctgcacataatggttcgaatgcgttttaagcaagcg 1678
Db 1509 CGGTTCCGGTCTGCTGGGTTTGGGCTGCAACATATTGCTTGAATGCGTTTAAAGCAAGCG 1568
Qy 1679 agtatgcttttggctctgttcaacgcggtgaggggttatcgggttggaggagagtgacggc 1738
Db 1569 AGTATGCTTTTGGCTCTGTTCAACGGCGGTGAGGGTTTATCGGTTGAGGAGAGTACGGC 1628
Qy 1739 tgtctaatgttggg 1752

Db 1629 TGTCTCATGTTGGG 1642

RESULT 12

AR174883

LOCUS

DEFINITION

ACCESSION

VERSION

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

TITLE

JOURNAL

FEATURES

source

BASE COUNT

ORIGIN

Query Match

Best Local Similarity

Matches 1642; Conservative

Score 1570; DB 6; Length 1642;

Pred. No. 0;

Mismatches 0; Indels 52; Gaps 2;

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

AR174883

Sequence 9 from patent US 6307126.

AR174883

GI:17915203

Unknown.

Unclassified.

1 (bases 1 to 1642)

Harber,N.P., Peng,J., Richards,D.E. and Carol,P.

Nucleic acid encoding GAI gene of Arabidopsis thaliana

Patent: US 6307126-A 9 23-OCT-2001;

Location/Qualifiers

1..1642

405 a

360 c

423 g

454 t

79.9%; Score 1570; DB 6; Length 1642;

96.9%; Pred. No. 0;

0; Mismatches 0; Indels 52; Gaps 2;

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

AR174883

Sequence 9 from patent US 6307126.

AR174883

GI:17915203

Unknown.

Unclassified.

1 (bases 1 to 1642)

Harber,N.P., Peng,J., Richards,D.E. and Carol,P.

Nucleic acid encoding GAI gene of Arabidopsis thaliana

Patent: US 6307126-A 9 23-OCT-2001;

Location/Qualifiers

1..1642

405 a

360 c

423 g

454 t

79.9%; Score 1570; DB 6; Length 1642;

96.9%; Pred. No. 0;

0; Mismatches 0; Indels 52; Gaps 2;

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||

|||||


```
Qy 719 gcgcttttgctgcgtgaagctgttcagaagagagaatctgaactgtgcggaagcctctg 778
Db 609 CGCGTTTTGGCTTCGCTGAAGCTGTTTCAGAAAGAGAAATCTGACTGTGGCGGAAGCTCTG 668
Qy 779 gtgaagcaaatcggaattctagctgttctcaaatcgagagctatgagaaaagtcgctact 838
Db 669 GTGAAGCAAAATCGAATCTTACGTGTTTCTCAATCGGAGCTATGAGAAAAGTCGCTACT 728
Qy 839 tacttcgcgcgaagctctcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgc 898
Db 729 TACTTCGCGGAAGCTCTCGCGCGCGGATTTACCGTCTCTCTCTCGTCGCAGAGTCCAATC 788
Qy 899 gacacactctctccgatactcttcagactcttcagactcttcagactcttcagactcttcag 958
Db 789 GACCACCTCTCTCCGATCTTTCAGATGCACCTTACGAGACTTGTGCTTATCTCAAG 848
Qy 959 ttcgctcaacttcagcggaatcaagcattctcaagcttctcaagcttctcaagcggaagagatt 1018
Db 849 TTCGCTCACTTCACGCGGAATCAAGCGATTTCTGAAGCTTTTCAAGGGAAGAAAGAGTT 908
Qy 1019 catgtcattgattctctatagtcgaaggtcttcaatggcgcgcgcgcgcgcgcgcgcgcgcgc 1078
Db 909 CATGTCATTGATTCTCTATCAGTCAAGGTCTTCAATGGCGCGGCTTATCGAGGCTCTT 968
Qy 1079 gcgcttcgacgtgtgttcctcctgtttctccggttaaccgggaattggtccaaccggcaccg 1138
Db 969 CGGCTTGACCTGGTGTCCTGCTGTTTTCGGGTAAACCGGAATTTGTCACCGGACCG 1028
Qy 1139 gataatttcgattatcttcataagagtggtgtgaagctggctcatttagctgagcgatt 1198
Db 1029 GATAATTTCGATTATCTTCATGAAGTTGGGTGTAAGCTGGCTCATTTAGCTGAGCGGATT 1088
Qy 1199 cactgtgagtttgagtcagagagatttggtgctaacactttagctgatctcttgactctcg 1258
Db 1089 CACGTTGAGTTGAGTACAGAGAGATTGTGGCTAACACTTTAGCTGATCTTGATGCTTCG 1148
Qy 1259 atgcttaagcttagcaaaagtagatgaatctgttcggttaactctgttttcgagctt 1318
Db 1149 ATGCTTGAGCTTAGCAAGTAGATGAATCTGTGGCGTTAACTCTGTTTTTCGAGCTT 1208
Qy 1319 cacaagctcttgggacacacctggcgatcgataaggtctcttggtggtgaatcagatt 1378
Db 1209 CACAAGCTCTTGGGACGACCTGGTGGCATCGATGAAGGTTCTTGGTGGTGAATCAGATT 1268
Qy 1379 aaaccggagatttctcaactgtggttagcaggaatcgaaaccataatagtcogattttctta 1438
Db 1269 AAACCGGAGATTTTCACTGTGTTGAGCAGGAATCGAAACCATATAGTCCGATTTTCTTA 1328
Qy 1439 gatcggtttactgagtcggttcattataactcgacgctgttttgactcgttggaagggtga 1498
Db 1329 GATCGGTTTACTGAGTCGTTGCATTTATCTACGACGTTGTTTGTACTCGTTGGAAGGTGTA 1388
Qy 1499 ccgagtggtcaagacaaggtcatctcgagagtttacttgggttaaacagatctgcaacgtt 1558
Db 1389 CCGAGTGGTCAAGACAAAGGTCTATCTCGAGGTTTACTTGGGTAAACAGATCTGCAACGTT 1448
Qy 1559 gtgagctgtgtagacactgaccgagttgagcgtcatgaaacgcttgagtcagtgaggaac 1618
Db 1449 GTGCGTTGTGATGACCTGACCGAGTTGAGCGTTCATGAAACGTTTGAGTCACTGAGGAAC 1508
Qy 1619 cgggttcgggtctgctgggtttgcgctgcacatatattggttcgaatgcgttttaacaagcg 1678
Db 1509 CGGTTCGGGCTGCTGGGTTTCCGGCTGCACATATATGTTCCGAATGCGTTTAAACAACG 1568
Qy 1679 agtatgcttttggctctgttcaacggcgggtgaggggttatcggttgaggagagatgacggc 1738
Db 1569 AGTATGCTTTTGGCTCTGTTCAACGGCGGTGAGGTTATCGGGTGAGGAGATGACGGC 1628
Qy 1739 tgcctcatgttggg 1752
Db 1629 TGTCTCATGTTGGG 1642
```

RESULT 13
LOCUS A64703
DEFINITION Sequence 7 from Patent WO9729123.
ACCESSION A64703
VERSION A64703.1 GI:4530765
KEYWORDS
SOURCE

ORGANISM

Arabidopsis thaliana
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsi.

REFERENCE

AUTHORS

TITLE

JOURNAL

COMMENT

FEATURES

source

1.1636

/organism="Arabidopsis thaliana"

/strain="LANDSBERG RECTA"

/db.xref="taxon:3702"

/chromosome="1"

/map="20.9"

/haplotype="GAI-D5"

BASE COUNT 403 a 357 c 422 g 454 t

ORIGIN

Query Match 79.2%; Score 1556.4; DB 6; Length 1636;

Best Local Similarity 96.5%; Pred. No. 0;

Matches 1636; Conservative 0; Mismatches 1; Indels 58; Gaps 2;

Qy 59 tagaagtggtagtgagtgaaacaaatccttaagcagtccttaacgcgaccccgaaagct 118

Db 1 TAGAAGTGGTAGTGAGTGAAACAAATCCTTAAGCAGTCTTAACCGATCCCGAAGCT 60

Qy 119 aaagattcttcaccttcccaataaagcaaaccttagatccgacattgaaagaaaaaacct 178

Db 61 AAAGATTCTTCACCTTCCCAATAAAGCAAAACCTTAGATCCGAGATTGAAGGAAAAACCT 120

Qy 179 tttagatccattctctgaaaaacaaacccatgaagagagatcatcatcatcataa 238

Db 121 TTTAGATCCATCTCTGAAAAAAAACCAACCATGAAGAGAGATCATCATCATCAATCAA 180

Qy 239 gataagaagactatgatgaatgaagaagacgacggttaacgcgcatgagtgattcta 298

Db 181 GATAGAGAGACTATGATGATGAATGAAGAGACACGCTTAACGGCATG----- 228

Qy 299 gctgttcttggttacaaagggttaggtcatcggaatggctgatgttgcagaaaactcgag 358

Db 229 -----GATGTTGCTCAGAAACTCGAG 249

Qy 359 cagcttgaagttatgatgtctaattgttcaagaagacgatcttctcaactcgctactga 418

Db 250 CAGCTTGAAGTTATGATGCTTAATGTTTCAAGAGACGATCTTCTCAACTCGCTACTGAG 309

Qy 419 actgttcaactataatccggcgagcgttttacacgtggcttgattcttactcaccgacctt 478

Db 310 ACTGTTCACTATATCCGGCGGAGCTTTACACGTGGCTTGATTCTATGCTCACCAGACCTT 369

Qy 479 aatcctcgttcgttcaacgcgcgagtagcatcttaaaagctattcccgggtgacgcgattctc 538

Db 370 AATCCTCGTCGTCTAAACGCGGAGTACGATCTTAAAGCTATTCCCGGTGAGCGGATTCTC 429

Qy 539 aatcagttcgcattcgcattcgccttctcgtctaaccaagcgcgcgagagagatcagcat 598

Db 430 AATCAGTTTCGCTATCGATTTCGGCTTCTTCGCTTAACCAAGCGCGGAGGAGATACGAT 489

Qy 599 actcaacaagcgggttgaaatgctcaaacggcgtcggtggaaaaccaccacagcgacggct 658

Db 490 ACTACAAACAGCGGTTGAATGCTCAACCGCGCTCGTGGAAACCAACACACAGCGGCT 549

QY 659 gagtcaactcggcatgttctcctggttgactcgcagagagaacggtgtgctcgtcttcac 718
|||||
Db 550 GAGTCAACTCGGCATGTTGCTCTGGTGTACTCGCAGGAGAACGGTGTGGCTCTCTTCAC 609

QY 719 ggcgttttggcttgcgtgaagctgttcgaagagaatactgactgtgcgggaagctctg 778
|||||
Db 610 GCGCTTTTGGCTTGGCTGAAGCTGTTCAGAGGAGAACTCTGACTGTGCGGAAGCTCTG 669

QY 779 gtgaagcaaatcggattcttagctgttctcaaatcggagctatgagaaagtcgctact 838
|||||
Db 670 GTGAACCAATCGGATCTTACGCTGTTTCTCAAAATCGGAGCTATGAGAAAAGTCGCTACT 729

QY 839 tacttcgcgaagctctcgcggcgaggattaccgtctctctccgtcgcagagtcctcaatc 898
|||||
Db 730 TACTTCGCGGAGCTCTCGCGGGCGGATTTACCGTCTCTCTCCGTCGCAGAGTCCAATC 789

QY 899 gaccactctctccgatactcttcagacttcagacttcagagacttgctcttctcaag 958
|||||
Db 790 GACCACCTCTCTCCGATATCTTTCAGATGCACCTTCTACGAGACTTGTCTTTATCTCAAG 849

QY 959 ttccgtccacttcacggcggaatcaagcgattctcgaagcttttcaagggaagaaaagatt 1018
|||||
Db 850 TTTCGCTCACTTCACGGCGGAATCAAGCGATCTTCGAAGCTTTTCAAGGGAGAAAAGATT 909

QY 1019 catgtcaattgattctctatgagtcgaaggtcttcaatggccgcgcttatgcaggctctt 1078
|||||
Db 910 CATGTCAATTGATTTCTATGATCAAGGCTTT-----GGCGGCTTATGCAAGGCTCTT 962

QY 1079 ggcgttcgacctgggtgctcctcctgtttccgggttaacccgggaattggtccaccggcaccg 1138
|||||
Db 963 GCGCTTCGACCTGGTGGTCTCTCTGTTTTCCGGTTTAACCGGAATTCGTCACCGGACCG 1022

QY 1139 gataatttcgattctctcatgaagtgggtgaagcttggtcatttagctgagcgatt 1198
|||||
Db 1023 GATAATTTCGATTAATCTTCATGAGTTGGGTGTAACTGGCTCATTTAGCTGAGGCGATT 1082

QY 1199 cactgttgaatttgagtcagagagatttgggttaacacttttagctgatttgatgcttcg 1258
|||||
Db 1083 CACGTTGAGTTTACGACAGAGAGATTGTGGCTTAACACTTTTAGCTGATCTTGATGCTTCG 1142

QY 1259 atgcttgagcttagaccaagtagatgaactgttggttggttaactctgttttcgagctt 1318
|||||
Db 1143 ATGCTTGAGCTTAGACCAAGTAGATTTGAATCTGTTCGGGTAACTCTGTTTTCGAGCTT 1202

QY 1319 cacaagctcttggagcagcctggtgcgatacgataaggtttcttgggtggtgtaacagatt 1378
|||||
Db 1203 CACAAGCTCTTGGGAGCCTGGTGGGATCGATAAGGTTCTTGGTGTGTGATCAGATT 1262

QY 1379 aaacccggagatttcaactgtggtgagcagggaatcgaaaccataatagtcgcgattttctta 1438
|||||
Db 1263 AAACCCGGAGATTTTCACTGTGTTGAGCAGGAATCGAACCAATAATAGTCCGATTTTCTTTA 1322

QY 1439 gatcggtttaactgagctggttgattattactcgaagctgttgactcgttgggaagtgta 1498
|||||
Db 1323 GATCGGTTTACTGAGTCGTTGATATTATTACTCGACGTTTGTGACTCGTTGGAAGTGTA 1382

QY 1499 ccgagtggttcaagacaaggtcgtcggaggtttacttgggttaaacagatctgcaacggtt 1558
|||||
Db 1383 CCGAGTGGTCAAGACAAAGTCAATGTCGGAGGTTTACTTGGGTAAACAGATCTGCAACGTT 1442

QY 1559 gtggttctgtagtgaacctgaccgagttgagcgtcatgaaacgtttgagtcagtgaggaac 1618
|||||
Db 1443 GTGGGTTGTGATGGAGCTCACCGAGTTGAGCGTTCATGAAACGTTGACTCAGTGGAGGAAC 1502

QY 1619 cgggttcgggtctgcgtggttttcgggtgcacataattggttcgaatgcgtttaagcaagcg 1678
|||||
Db 1503 CGGTTTCGGGCTCTGCTGGGTTTCGGGCTGCACATATTGGTTTCGAAATCGGTTTAAAGCAAGCG 1562

QY 1679 agtatgcttttggctctgttcaacggcggtgaggggttatcggttgagagagagtgacgcg 1738
|||||
Db 1563 AGTATGCTTTTGGCTCTGTTCAACGGCGGTGAGGGTTATCGGGTGGAGGAGAGTGACGCG 1622

QY 1739 tgtctcatgttggg 1752
|||||
Db 1623 TGTCTCATGTTGGG 1636

RESULT 14
LOCUS ARL174882
DEFINITION Sequence 7 from patent US 6307126.
ACCESSION ARL174882
VERSION ARL174882.1 GI:17915202
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1636)
AUTHORS Harberd,N.P., Peng,J., Richards,D.E. and Carol,P.
TITLE Nucleic acid encoding GAI gene of Arabidopsis thaliana
JOURNAL Patent: US 6307126-A 7 23-OCT-2001;
FEATURES Location/Qualifiers
 source 1..1636
 /organism="unknown"
BASE COUNT 403 a 357 c 422 g 454 t
ORIGIN

Query Match 79.2%; Score 1556.4; DB 6; Length 1636;
Best Local Similarity 96.5%; Pred. No. 0;
Matches 1635; Conservative 0; Mismatches 1; Indels 58; Gaps 2;

QY 59 tagaagtggtagtggagtgaaaaaacaataaagcaaacctagatccgacattgaagaaaacct 118
Db 1 TAGAAGTGGTGTAGTGGAGTGAATAAACAATCTTAAGCAGTCTCTAACCGATCCCGAAGCT 60

QY 119 aagattcttcaccttcccataaataaagcaaacctagatccgacattgaagaaaacct 178
Db 61 AAAGATCTTTCACCTTCCCACAAATAAAGCAAAACCTTAGATCCGACATTTGAAGGAAAAACCT 120

QY 179 tttagatccatctctgaaaaaaacccatgaagagagatcatcatcatcatcaaa 238
Db 121 TTTTAGATCCATCTCTGAAAAAAACCAACCATGAAGAGAGATCATCATCATCATCAA 180

QY 239 gataagaagactatgatgatgaatgaagaagcagcggtaacggtgagtgagcttcta 298
Db 181 GATAAGAAGACTATGATGATGAATGAAGAAGACGACGGTAACGGCATG----- 228

QY 299 gctgttcttggttacaaggttaggtcatcggaataaggtgatttgcctcagaacacgag 358
Db 229 -----GATGTTGCTCAGAAACTCGGAG 249

QY 359 cagcttgaagtattgatgtctaatgttcaagaagacgattcttctcaactcgtactgag 418
Db 250 CAGCTTGAAGTTATGATGTCTAATGTTCAAGAAGACGATCTTTCTCAACTCGCTACTGAG 309

QY 419 actgttcaatataatccggcgaggtttacaactggttgatttatgtctcaccgacctt 478
Db 310 ACTGTTTCACTATTAATCCGGCGGAGCTTACACGTGGCTTGATTCTATGCTACCGACCTT 369

QY 479 aatccctcgtcgttaacccgagtaagattcttaagctattcccggtgacgagattctc 538
Db 370 AATCCCTCGGTCGCTTAACCGCGAGTACGATCTTTAAAGCTATTCCCGGTGACGCGATTCTC 429

QY 539 aatcagttcgtctatcggttcggttcttcgtctaaaccaagcggcgagagatacgtat 598
Db 430 AATCAGTTTCGCTATCATGTTCCGGCTTCTCGTCTTAACCAAGCGCGGAGAGATACGTAT 489

QY 599 actacaaacaagcgggttgaatgtctcaacggttcggttgaaacccaccacagcgagct 658
Db 490 ACTTACAAACAAGCGGTTGAAATGCTCAAAACGGCGCTGCTGGAAACCAACACAGCGAGCT 549

QY 659 gactcaactcggcatattgtctcctggttgactcgcagagagaacggtgtggtctcgttcac 718
Db 550 GAGTCAACTCGGCATGTTTCTCTGGTGTGACTCGCAGGAGAACGGTGTGGCTCTCTGTTTTCAC 609

```
Qy 719 gcgttttggcttgctgaagctgttcaagagagaaatctgactgtggcggaagctctg 778
Db 610 GCGCTTTTGGCTTGGCTGAAGCTGTTTCAGAAAGGAGAATCTGACTGTGGCGGAAGCTCTG 669
Qy 779 gtgaagaaatcgagattcttagctgtttctcaaatcggagctatgagaaagtcgctact 838
Db 670 GTGAAGCAAAATCGGATTTCTTACGTTTCTCAAAATCGAGCTATGAGAAAAGTCGCTACT 729
Qy 839 tacttcgcaagctctgcgcgcgcgatttacgctctctccgctcgcagagcccaatc 898
Db 730 TACTTCGCCGAAGCTTCGCCGCCGGAATTTACCGTCTCTCTCCGTCGACAGATCCCAATC 789
Qy 899 gaccactctctccgatactcttcagatgcactcttcacagacttgccttatctcaag 958
Db 790 GACCACCTCTCTCCGATACCTTTCAGATGCACCTTCACGAGACTGTGCTTATCTCAAG 849
Qy 959 ttgcctcaactcagcggaatcaagcgattctcgaagcttttcaagggaagaaagatt 1018
Db 850 TTCGCTCACTTCACGGCGGAATCAAGCGGATTCCTCGAAAGCTTTTCAAGGGAAGAAAGATT 909
Qy 1019 catgtcattgattctctatgagtcgaagcttccaatggccgcgcttatcgagctctt 1078
Db 910 CATGTCATTGATTCTCTATGAGTCAAGTCTT-----GGGCGCTTATCGAGCTCTT 962
Qy 1079 gcgttcgacctggtgctctctctgtttccggttaaccggaattggtccaccggcaccg 1138
Db 963 GCGCTTCACCTGCTGCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT 1022
Qy 1139 gataatttcgattctctcatgaagtggtggttaagctgcttcattagctgagcgcaatt 1198
Db 1023 GATAATTTCGATTATCTTCATGAAGTGGGGTGAAGCTTGAAGCTTGAAGCTTGAAGCTTGA 1082
Qy 1199 cagcttgagttgagtcagagagattgtggttaacacatttagctgattgagctgctcg 1258
Db 1083 CACCTTGAGTTGAGTACAGAGGATTTGCTGCTAACACTTTAGCTGATCTTGATGCTTCG 1142
Qy 1259 atgcttgagcttagacaaagtgaattgaatctgttcggttaactctgttttcgagctt 1318
Db 1143 ATGCTTGAGCTTAGACCAAGTGAGATTGAATCTGTTGCGGTAACTCTGTTTTCGAGCTT 1202
Qy 1319 cacaagctcttgacacacttgctgcatcgatgaagattctgtgtggtgaatcaagatt 1378
Db 1203 CACAAGCTCTTGGGACGACCTTGGTGGCATCGATGAAGGTTCTTGGTGTGGTGAATCAGATT 1262
Qy 1379 aaacggagattttcaactgtggtgagcaggaatcgaaacataatagtcgcgattttctta 1438
Db 1263 AAACCGGAGATTTTCACTGTGTTGAGCAGGAATCGAAACCATATAATAGTCCGATTTCTTA 1322
Qy 1439 gatcggtttactgagtcggtgcatattactcgcagctgtttgttgcactcgttggaaggtga 1498
Db 1323 GATCGGTTTACTGAGTCGTTGCATTATTTACTTCGACGTTGTTTGTGCTGTTGGAAGGTTGA 1382
Qy 1499 ccgagtggtcaagacaaggttcgaggtttacttgggttaacacagatctgcaacgctt 1558
Db 1383 CCGAGTGGTCAAGACAGGTCATGCGAGGTTTACTTGGTAAACACATCTGCAACGCTT 1442
Qy 1559 gtggttgatgtagactgacccgaggttagcgtcatgaaacggttagtgcagtgaggaac 1618
Db 1443 GTGGCTTGTGATGACCTGACCGAGTTGAGCGTTCATGAACGTTGAGTCAAGTCAAGGAAAC 1502
Qy 1619 cgggttcgggtctgctgggtttgctggttcgacatattggttcgaatgctgtttaaagcaagcg 1678
Db 1503 CGGTTCCGGTCTGCTGGGTTTGGCGCTGCACATATTTGTTGCAATGCGTTTAAAGCAAGCG 1562
Qy 1679 agtatgcttttgcctctgttcaacgcggtgagaggttatcggttgaggaagagtgagcgc 1738
Db 1563 ACTATGCTTTTGGCTCTGTGTTCAACGGCGGTGAGGTTATCGGGTGGAGGAGATGACGGC 1622
Qy 1739 tgtctcatgttggg 1752
Db 1623 TGTCTCATGTTGGG 1636
```

RESULT 15
ATRGAL
LOCUS A.thaliana mRNA for RGAL gene. 2210 bp mRNA linear PLN 19-AUG-1997
DEFINITION
ACCESSION Y11336
VERSION Y11336.1 GI:2339977
KEYWORDS RGAL gene.
SOURCE thale cress.
ORGANISM Arabidopsis thaliana
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsids.
Truong,H.N., Caboche,M. and Daniel-Vedele,F.
Sequence and characterization of two Arabidopsis thaliana cDNAs isolated by functional complementation of a yeast gln3 gdh1 mutant
FEBS Lett. 410 (2-3), 213-218 (1997)
97379310
REFERENCE 2 (bases 1 to 2210)
AUTHORS Truong,H.N.
TITLE Direct Submission
JOURNAL Submitted (13-FEB-1997) H.N. Truong, INRA-Versailles, Laboratoire de Biologie Cellulaire, Route de Saint-Cyr, 78026 Versailles Cedex, FRANCE
FEATURES
source
1. .2210
/organism="Arabidopsis thaliana"
/sub_species="(L). Heynh"
/db_xref="taxon:3702"
/dev_stage="two-leaf stage seedlings"
/note="Landsberg erecta ecotype"
132. .1895
/genes="RGAL"
132. .1895
/genes="RGAL"
/codon_start=1
/product="RGAL protein"
/protein_id="CAA72177.1"
/db_xref="GI:2339978"
/db_xref="SPTREMBL:Q23642"
/translation="MKRDHFOGRLSNHGTSSSSSSISKDKMMVKKEEDGGGNMDD ELAYLGKYKRSSEMAEVALKLEQLETMSNVQEDGLSHLATDTVHYNPSELYSLNDN MLSELNPLPASPANGEDLPVPSICGFPASDYDLKVIPTGNALYCPAIDSSSSNN ONKRLKSCSSPDSMTSTGTGTGIGVIGTITTTTAAAESTRSVILVDSQENG VRLVHALMACAEAIQNNLTALAEALVKIGCLAVSQAGAMRKVATYFAELARRIYRL SPQNLQIDHCLSDTLQMHFETCPYLFKFAHPTANQALILEAFEGKRVHVIDFSNOGL QWPAALQALAREGGPPPTFRLTGTGPPAPDNDHLEVCCKLAQALAIHVEFVYRGF VANSIADLDASMLELRPSDTEAVAVNSVFEHLKILGPGGIEKVLGVVKQIKPVFTV VEGESNNGPVFLDRFTESLHYSTLFLDSLEGVPNSODKVMSEVYLKQKICNLVACEG PDRVERHETLSQWNGREGSSGLAPAHILGSNAFQAQSMLLSVFNSGGQYRVESNGCLM LGWHTREPLITTSAMKLSAAH"
BASE COUNT 583 a 454 c 518 g 655 t
ORIGIN
Query Match 46.6%; Score 915.8; DB 8; Length 2210;
Best Local Similarity 74.8%; Pred. No. 8.2e-255;
Matches 1254; Conservative 0; Mismatches 312; Indels 111; Gaps 4;
Qy 235 tcaagataaagaagactatgatgaataagaagac---gacggttaacgagcagtgatga 291
Db 206 TAAAGATAAGATGATGATGGTGAAGAAAGAAAGACACGGTGGAGGTACATGACGACGACA 265
Qy 292 gcttcagctgtcttcgttacaaggttagctcatcgaaatggctgagatgttgcctcagaa 351
Db 266 GCTTCTCGCTCTTTTAGGTTACAAAGTTAGTCTATCGAGATGGCGGAGGTTGCTTTGAA 325
Qy 352 actcgagcagcttgaagttatgatctaatgttcaagaagaacatcttctcaactcgc 411
Db 326 ACTGAAACAATTAGAGACGATGATGAGTAATGTTTCAAGAAAGATGTTTATCTCATCTGC 385
Qy 412 tactgagactgttcactataatccggcgagagcttttacacgcttggtgattctatgctcac 471

```

Db 386 GACGGATACTGTTTATTATAATACGTCGGAGCTTTATCTTGGCTGTGATAATATGCTCTC 445
Qy 472 cgacttaactccgctcgctctaag-----
Db 446 TGAGCTTAATCCTCCTCCTCTTCCTCGGGGAGTCTTAACGGTTTAGATCCGGTTCCTTCCTTC 505
Qy 498 -----ccgagtaacatcttaaaagctattcccggtgacgc 531
Db 506 GCCGGAGATTGTGTTTTCCTCGGCTTCGGATTATGACCTTAAAGTCATTCCCGGAACGC 565
Qy 532 gatttcaatcagttcgtatcgattcggtcttctgctta-----accaaggcggc 583
Db 566 GATTATACAGTTTCCCGGAGTATGTTCTCTCTCTCGTTCGTAATATCAGAACAAAGCGGTTT 625
Qy 584 gaggagatacgtatactacaacaagcggttgaaatgctcaaacgctcggtgga----- 639
Db 626 GAAATCATGTCGAGTCTGATTCTATGTTTACATCGACTTCGACGGGTACGCAATG 685
Qy 640 -----aaccaccacagcgagcggtgagtc 663
Db 686 TGGAGTCATAGGAACGAGCGGTGACGACAACACCACGACGACGAGCGGCGGCTGAGTC 745
Qy 664 aactcggaatgttctcgtgtgactcgagagaaagcggtgctcgtctcgttcaacgcgt 723
Db 746 AACTCGTTCTGTTATCTGTTGACTCGCAAGAGAACGGTGTTCGTTAGTCCACGCGCT 805
Qy 724 ttgacttgagctgaagcttcagagaggaatctactgtgaggaagctcgtgga 783
Db 806 TATGGCTGTGCAAGAACAATCCAGCAGAACAAATTTGACTCTAGCGGAAGCTCTGTGAA 865
Qy 784 gcaaatcggtattcttagctgtttctcaaaatcgagagctatgagaaaagtcgctacttact 843
Db 866 GCAATCGGATGCTTAGCTGTGCTCAAGCGGAGCTATGAGAAAAGTGGCTACTTACTT 925
Qy 844 cgccgaagctcgcgcggcgagattaccgctctctcgtcgcgagagtcgaatcgacca 903
Db 926 CGCCGAAGCTTTAGCTCGCGGAGTACTACCGTCTCTCTCCGCGGAGAAATCAGATCGATCA 985
Qy 904 ctctctccgatactctcagatgactctcagagacttgccttatctcgaattcgc 963
Db 986 TTGTCTCTCCGATACTCTTCAGATGCACCTTTTACGAGACTTGTCTTATCTTAATTCGC 1045
Qy 964 tcaactcaagcggaatcaagcgattctcgaagctttcgaaggggaaagagttcatgt 1023
Db 1046 TCACCTTCACGCGCAACCAAGCGATTCTCGAAGCTTTTGAAGGTAAAGAGAGATACAGT 1105
Qy 1024 cattgatttctatagatcaaggttctcaatggcgcggtcttatgcaaggctcttgccgt 1083
Db 1106 CATTGATTCTCGATGAACCAAGGTCTTCAATGGCTCTCGCTTATGCAAGCTCTTGGCGCT 1165
Qy 1084 tcgaccttggtggtcctcgtgtttccggttaaccggaattggtccaccgacccgataa 1143
Db 1166 TCGAAGAGGAGGTCTCCAACTTTCCGGTTAACCGGAATGGTCCACCGCGCGGATAA 1225
Qy 1144 ttctgattatctcatgaagtgggtgtgaagctggctcatttagctgagcgattcacgt 1203
Db 1226 TTCTGATCATCTTCATGAAGTTGGTTGTAATTAGCTCAGCTTGGGAGGCGATTACAGT 1285
Qy 1204 tgagtttgagtacagagattgttggttaacacactttagctgatcttgatgctcgatgct 1263
Db 1286 AGAATTCGAATACCGTGGATTGCTTGTCTTAACAGCTTAGCCGATCTCGATGCTTCGATGCT 1345
Qy 1264 tgagcttagaccaagtgagattgaatcgtgttcggttaactctgttttccgagcttcaaa 1323
Db 1346 TGAGCTTAGACCGAGCGATACGGAAGCTGTGTCGGGTGAACCTCTGTTTGTAGCTACATAA 1405
Qy 1324 gctctgggacgacctggtcgatcgataaggttcttggtgtggtgaatcagattaaacc 1383
Db 1406 GCTCTTAGTCTGCCGGTGGATAGAGAAAGTTCTCGCGGTTGTGAACAGATTAAC 1465
Qy 1384 ggagatttctactgtgttgagcagggaatcgaaacataatagtcgattttcttagatcg 1443

```

```

Db 1466 GCTGATTTTCACGGTGTGTTGAGCAAGAATCGAACCATAAACGACCGGTTTCTTTAGACCG 1525
Qy 1444 gtttactgagtcggttgctattactactcgaagctgtttgactcgttggaaggtgtaccgag 1503
Db 1526 GTTTACTGAATCGTTACATTTATTCGACTCTGTTTGGTTCGTTGGAAGGAGTTCGAA 1585
Qy 1504 tggtaagacaaggtgctcatgctcgagggtttacttgggttaaacagatctcgaacggtgtg 1563
Db 1586 TAGTCAAGACAAAGTCTCATGCTGAAGTTTACTTAGGGAACACAGATTTCTAATCTGGTGC 1645
Qy 1564 ttgtgatggacctcaacgagttgagcgtcatgaaacggttgagtcagtgaggaacccggtt 1623
Db 1646 TTGTGAAGGTCTGACAGAGTCGAGAGACGAAACGTTGAGTCAATGGGAAACCGGTT 1705
Qy 1624 cgggtcgtcgtgggtttgcggtcgacacatattggttcgaatcggtttaaagcaagcgagat 1683
Db 1706 TGGTTCGTCGCGTTTAGCGCGGCGACATCTTGGGTCTTAACGGGTTTAAGCAAGCGAGTAT 1765
Qy 1684 gcttttggtcgtcttcaacgcggtgaggggttatacgggtggagagagtgacggtcgtct 1743
Db 1766 GCTTTTGTCTGTTTAAATAGTGGCAAGGTTATCGTGTGGAGGAGAGTAATGGATGTTT 1825
Qy 1744 catgttgggttggcacacacgacgctcattagccacctcggcttggaaactctccac 1800
Db 1826 GATGTTGGGTTGGCACACTCGCCCACTCATTTACCACCTCCGCTTGGAAACTCTCGAC 1882

```

Search completed: May 11, 2002, 16:36:53
Job time: 6454 sec

THIS PAGE BLANK (USPTO)